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AFTERNOON SESSION 2:05 P.M.
WEDNESDAY, JANUARY 27, 1999
(THE FOLLOWING PROCEEDINGS WERE HELD IN THE COURTROOM, IN THE PRESENCE OF THE JURY)
THE COURT: GOOD AFTERNOON, EVERYBODY. MR. OHLEMEYER, WHAT'S NEXT ON OUR AGENDA?
MR. OHLEMEYER: YES. DR. WILLIAM WARREN, W-A-R-R-E-N.
THE COURT: THE FIRST NAME WILLIAM?
MR. OHLEMEYER: WILLIAM.
THE COURT: OKAY.

TESTIMONY OF
WILLIAM HOWARD WARREN, M.D.,

A WITNESS CALLED ON BEHALF OF THE DEFENDANT, HAVING BEEN DULY SWORN, TESTIFIED AS FOLLOWS:
THE CLERK: PLEASE STATE YOUR NAME.
THE WITNESS: WILLIAM HOWARD WARREN.
THE CLERK: PLEASE SPELL YOUR NAME.
THE WITNESS: MY LAST NAME IS W-A-R-R-E-N.
THE CLERK: IS WILLIAM W-I-L-L-I-A-M?
THE WITNESS: CORRECT.
THE CLERK: AND HOWARD IS H-O-W-A-R-D?
THE CLERK: THAT'S CORRECT.
THE CLERK: THANK YOU. PLEASE TAKE THE STAND.

DIRECT EXAMINATION

BY MR. OHLEMEYER: Q. GOOD AFTERNOON, DOCTOR.
A. GOOD AFTERNOON.

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Q. TELL US WHAT YOU DO.
A. I'M A GENERAL THORACIC SURGEON.
Q. AND WHERE DO YOU PRACTICE?
A. I PRACTICE IN CHICAGO AT THREE HOSPITALS. THE PRIMARY HOSPITAL IS RUSH PRESBYTERIAN AND ST. LUKE'S MEDICAL CENTER, AND ALSO AT COOK COUNTY HOSPITAL AND WEST SUBURBAN HOSPITAL MEDICAL CENTER.
Q. WHAT SORT OF --IT'S PROBABLY A BAD QUESTION. WHAT SORT OF HOSPITALS ARE THOSE? IS THERE ANYTHING UNIQUE OR DIFFERENT ABOUT ONE COMPARED TO THE OTHER?
A. TWO OF THOSE THREE ARE TEACHING HOSPITALS.
Q. WHAT DOES THAT MEAN?
A. AT RUSH PRESBYTERIAN AND ST. LUKE'S MEDICAL CENTER, WE HAVE A GENERAL THORACIC AND WE HAVE A CARDIOVASCULAR TRAINING PROGRAM, WHERE RESIDENTS COME TO TAKE ADDITIONAL TRAINING IN OPEN HEART AND CHEST SURGERY AND VASCULAR SURGERY, IN ORDER TO TAKE SPECIAL CERTIFICATION AND BOARDS IN THOSE FIELDS.
Q. I TAKE IT THORACIC -- T-H-O-R-A-C-I-C --
A. CORRECT.
Q. -- IS A SPECIALTY IN SOME SENSE?
A. YES. THE FIELD OF CHEST SURGERY TODAY IS REALLY BROKEN DOWN INTO TWO PARTS, CARDIAC AND THE NONCARDIAC.
PRACTICALLY SPEAKING, MANY PROGRAMS DON'T MAKE A DISTINCTION AND THE SURGEONS DO EVERYTHING. IN MY INSTITUTION, THE SURGEONS DO EITHER GENERAL THORACIC SURGERY, THAT IS, EVERYTHING APART FROM THE HEART, OR THEY SPECIALIZE IN HEART SURGERY. THE TRAINING IS THE SAME AND

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THE EXAMS ARE THE SAME.
I HAVE SUBSPECIALIZED IN CHEST SURGERY AND DO

JUST GENERAL THORACIC, WHICH IS PRIMARILY LUNG, CHEST WALL AND ESOPHAGUS.

Q. AS OPPOSED TO HEART SURGERY?

A. AS OPPOSED TO HEART SURGERY.

Q. CAN YOU DESCRIBE FOR US YOUR FORMAL EDUCATION.

A. WELL, I WAS BORN AND RAISED IN CANADA. I WENT TO THE UNIVERSITY OF TORONTO FOR MY UNDERGRADUATE TRAINING, AND MY MEDICAL SCHOOL TRAINING WAS IN TORONTO AS WELL.

Q. DID YOU DO ANY SORT OF INTERNSHIP OR RESIDENCY AFTER MEDICAL SCHOOL?

A. YES. I DID A STRAIGHT INTERNSHIP IN SURGERY AT THE TORONTO GENERAL HOSPITAL, AND WENT TO A FOUR-YEAR PROGRAM IN GENERAL SURGERY.

Q. AND WHERE WAS THAT PROGRAM?

A. AT THE TORONTO GENERAL HOSPITAL.

Q. AND THEN, DID YOU AT SOME POINT -- WHAT HAPPENS THEN IN TERMS OF YOUR TRAINING? ARE YOU THEN OUT WORKING OR --

A. WELL, THEN YOU'RE BOARD-ELIGIBLE, AND I TOOK MY BOARDS IN GENERAL SURGERY IN CANADA AND THE UNITED STATES.

SINCE I WANTED TO BE A CARDIOTHORACIC SURGEON, I HAD TO GO ON AND DO ADDITIONAL TRAINING, AND I CAME TO CHICAGO FOR THAT.

Q. YOU SAID YOU WERE BOARD-ELIGIBLE.

TELL US WHAT THAT MEANS.

A. WELL, I'M BOARD-CERTIFIED. "BOARD-ELIGIBLE"

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MEANS THAT YOU HAVE GONE THROUGH THE TRAINING, THAT YOU'RE ABLE TO SIT THE EXAMS.

"BOARD-CERTIFIED" MEANS THAT YOU HAVE ACTUALLY TAKEN THOSE EXAMS AND PASSED THOSE EXAMS.

Q. AND ARE YOU BOARD-CERTIFIED IN THORACIC SURGERY?

A. YES, I AM.

Q. DO YOU HAVE A CERTIFICATION IN THE MORE GENERAL SURGERY TOO?

A. YES, I DO.

Q. AND THEN A SIMILAR CERTIFICATION IN CANADA ALSO?

A. CORRECT.

Q. WOULD YOU DESCRIBE FOR US THEN THE SPECIALIZED TRAINING OR STUDY YOU DID IN CHICAGO.

A. WELL, I ALSO HAD AN INTEREST IN PATHOLOGY, IN ADDITION TO GENERAL THORACIC SURGERY. SO I CAME TO CHICAGO.

I ELECTED TO TAKE A YEAR OF SPECIAL STUDY AND RESEARCH ON LUNG TUMORS BEFORE I WENT ON TO CONTINUE MY TRAINING IN CARDIOTHORACIC SURGERY.

Q. PATHOLOGY IS A DIFFERENT SPECIALTY OF MEDICINE THAN SURGERY?

A. YES, IT IS.

Q. WHY IS IT THAT YOU WERE INTERESTED IN PATHOLOGY IF YOU WANTED TO BE A SURGEON?

A. WELL, I THINK IT HELPS A SURGEON TO UNDERSTAND PATHOLOGY. IN FACT, IN THE PAST, IT WAS A VERY INTEGRAL PART OF THE TRAINING PROGRAM. WHEN YOU OPEN A CHEST AND YOU SEE A TUMOR, IT HELPS TO HAVE SEEN THAT TUMOR GROSSLY AND

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MICROSCOPICALLY, AND HAVING STUDIED THOSE TUMORS AND SEEN OTHER CASES OF THOSE TUMORS.

THE MORE PATHOLOGY EXPERIENCE YOU CAN GET, PARTICULARLY RELATED TO YOUR FIELD, I THINK THE BETTER SURGEON YOU ARE.

Q. YOU MENTIONED SEEING THINGS MICROSCOPICALLY. WE TALKED A LITTLE BIT ABOUT THAT IN THIS TRIAL. YOU ALSO MENTIONED SEEING THINGS GROSSLY.

WHAT DO YOU MEAN BY "SEEING THINGS GROSSLY"?

A. WELL, THE ENTIRE SPECIMEN ARRIVES IN PATHOLOGY, ATTACHED TO SURROUNDING STRUCTURES. YOU GET A CHANCE TO FEEL THE CONSISTENCY OF IT, LOOK AT THE COLOR OF IT, TO SEE WHAT IT'S ATTACHED TO, TO HAVE A BETTER UNDERSTANDING OF WHAT THOSE TUMORS LOOK LIKE.

Q. WITH YOUR OWN EYES, AS OPPOSED TO THE MICROSCOPE?

A. CORRECT. WITH YOUR HANDS AS WELL.

Q. AFTER YOU DID THE SPECIAL TRAINING IN PATHOLOGY, WHAT DID YOU DO?

A. I WENT ON TO DO THREE YEARS OF TRAINING IN CARDIAC, THORACIC AND VASCULAR SURGERY.

Q. AND THAT WAS IN CHICAGO?

A. THAT'S RIGHT.

Q. AND CAN YOU DESCRIBE FOR US THE PRIVATE PRACTICE OF MEDICINE THAT YOU'VE BEEN INVOLVED IN.

A. IN 1985, I COMPLETED MY TRAINING AT RUSH PRESBYTERIAN AND ST. LUKE'S MEDICAL CENTER, AND WAS ASKED TO STAY ON STAFF AS A GENERAL THORACIC SURGEON SINCE THEN.

AND I'VE BEEN AT RUSH PRESBYTERIAN AND ST. LUKE'S

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SINCE 1985.

Q. DO YOU ALSO HAVE TEACHING DUTIES?

A. YES, I DO.

Q. WHAT IS IT THAT YOU TEACH AND WHERE DO YOU TEACH IT?

A. WELL, I TEACH AT RUSH PRESBYTERIAN AND ST. LUKE'S MEDICAL CENTER. APPROXIMATELY FIVE OR SIX YEARS AGO, RUSH PRESBYTERIAN ACQUIRED COOK COUNTY HOSPITAL, WHICH HAD BEEN PREVIOUSLY PART OF THE TRAINING PROGRAM OF THE UNIVERSITY OF ILLINOIS.

SO I WAS TEACHING AT RUSH PRESBYTERIAN AND ST. LUKE'S, AND I WAS ALSO TEACHING AT COOK COUNTY HOSPITAL.

NOW COOK COUNTY AND PRESBYTERIAN ARE FOLDED INTO ONE PROGRAM, SO I HAVE TEACHING RESPONSIBILITIES IN BOTH INSTITUTIONS.

Q. I'M GOING TO TELL YOU SOMETHING BEFORE THE COURT REPORTER DOES IT. IF YOU COULD SLOW DOWN JUST A LITTLE, I THINK IT WOULD BE EASIER FOR HER, BECAUSE I TEND TO TALK A LITTLE FAST TOO. I THINK THAT BOTH OF US ARE GOING TO CAUSE A PROBLEM.

A. I'M SORRY.

Q. THAT'S OKAY.

DO YOU BELONG TO ANY PROFESSIONAL SOCIETIES?

A. YES, I DO.

Q. TELL US, JUST GENERALLY, WHAT A PROFESSIONAL SOCIETY IS AND WHY SOMEBODY IN YOUR POSITION IS INVOLVED IN THOSE THINGS.

A. WELL, A PROFESSIONAL SOCIETY IS A SOCIETY OF, IN

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THIS CASE, SURGEONS, DOCTORS, THAT GET A CHANCE TO EXCHANGE IDEAS, PRESENT IDEAS TO ONE ANOTHER. USUALLY ASSOCIATED WITH THOSE SOCIETIES ARE JOURNALS AND PUBLICATIONS, WHICH GIVES YOU AN OPPORTUNITY TO SHARE YOUR EXPERIENCE.

I'M SORRY. I'M GOING TOO FAST. AND IT GIVES YOU AN OPPORTUNITY TO PARTICIPATE IN MANY ASPECTS OF MEDICINE BEYOND SIMPLY THE PRACTICE OF MEDICINE.

Q. AND I TAKE IT, DOCTOR, THAT ON A DAY-TO-DAY

BASIS, IS THE MAJORITY OF YOUR TIME SPENT ACTUALLY DOING SURGERY?

A. YES, IT IS.

Q. AND NOW, ON TOP OF THAT, YOU HAVE SOME TEACHING DUTIES?

A. YES, I DO.

Q. ON TOP OF THAT, YOU FROM TIME TO TIME ARE INVOLVED IN PUBLISHING IDEAS, I THINK YOU SAID?

A. YES.

Q. TELL US ABOUT THAT.

HOW DOES THAT WORK AND WHY IS IT DONE?

A. WELL, IT'S DONE BY WORKING UP AN IDEA OR A PARTICULAR CASE OR SERIES OF CASES TO PRESENT SOMETHING NEW AND TO PUT THAT TOGETHER IN WRITTEN FORM, TO SUBMIT IT TO THE VARIOUS JOURNALS FOR THEM TO REVIEW BY YOUR PEERS, AND TO DETERMINE WHETHER IT'S TRULY A GOOD IDEA, NEW IDEA, SOMETHING THAT SHOULD BE DISTRIBUTED TO OTHER DOCTORS. AND IF FOUND APPROPRIATE, IT IS PUBLISHED.

Q. AND WHERE ARE THOSE KINDS OF PAPERS PUBLISHED?

A. THERE ARE SEVERAL MAJOR JOURNALS. THE ANNALS OF

THORACIC SURGERY, THE JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY, CHEST, CANCER ARE FOUR LEADING JOURNALS.

Q. HAVE YOU DONE RESEARCH AND PUBLISHED THE RESULTS OF THAT RESEARCH IN THOSE JOURNALS?

A. YES, I HAVE.

Q. WHAT OTHER JOURNALS HAVE YOU PUBLISHED THE RESULTS OF YOUR RESEARCH IN?

A. VIRCHOV'S, V-I-R-C-H-O-V'S, ARCHIVES, THE AMERICAN JOURNAL OF PATHOLOGY, PATHOLOGY RESEARCH AND PRACTICE. THERE ARE MANY MORE. SHALL I GO ON?

Q. ARE THESE THE KINDS OF THINGS THAT OTHER DOCTORS WHO HAVE INTEREST IN THE FIELD READ OR SUBSCRIBE TO?

A. ABSOLUTELY.

Q. HAVE YOU WRITTEN CHAPTERS OR PORTIONS OF MEDICAL TEXTBOOKS?

A. YES, I HAVE.

Q. ON WHAT SUBJECTS?

A. VARIOUS ASPECTS OF THORACIC SURGERY, PATHOLOGY, AND THE CLINICAL-PATHOLOGIC CORRELATION OF THOSE TWO FIELDS.

Q. LET ME ASK YOU TO EXPLAIN THAT, "THE CLINICAL-PATHOLOGIC CORRELATION."

A. CORRECT.

Q. BETWEEN PATHOLOGY AND SURGERY?

A. CORRECT.

Q. WHAT DOES THAT MEAN?

A. WELL, IF ONE CONSIDERS PATHOLOGISTS DO PATHOLOGY AND SURGEONS DO SURGERY AND NEVER GET A CHANCE TO SHARE IDEAS, THEN THERE'S SOMETHING LOST.

SO I READ THE PATHOLOGY LITERATURE, I APPLY IT TO THE CLINICAL LITERATURE, I CORRELATE THE TWO, AND I TRY AND WRITE PAPERS BRINGING THE PATHOLOGY -- OR WHATEVER INSIGHTS THE PATHOLOGISTS CAN BRING INTO A SERIES OF CASES, AND TRY AND DERIVE SOME INSIGHT.

Q. HAVE YOU DONE RESEARCH AND PUBLISHED THE RESULTS OF THAT RESEARCH INVOLVING TUMORS THAT ARISE IN THE CHEST?

A. ABSOLUTELY.

Q. CAN YOU GIVE US SOME SENSE OF HOW EXTENSIVE OR HOW BROAD YOUR EXPERIENCE IN THAT AREA IS IN TERMS OF PUBLICATIONS?

A. I THINK THAT'S PROBABLY MY CHIEF FIELD OF INTEREST. AND I HAVE PUBLISHED, I THINK, ALMOST 100 PAPERS. NOW, THE MAJORITY OF THEM HAVE SOME INPUT FROM PATHOLOGY. I WOULD SAY MORE THAN HALF OF THEM HAVE CLINICAL-PATHOLOGIC IMPLICATIONS.

Q. HAVE YOU PUBLISHED PAPERS ON THE SUBJECT OF EPITHELIAL TUMORS?

A. YES, I HAVE.

Q. WHAT ARE EPITHELIAL TUMORS?

A. TUMORS ARE NEOPLASMS, ARE GROWTHS. AND "EPITHELIAL" MEANS THAT THEY'RE DERIVED FROM THE EPITHELIAL LAYER.

MALIGNANT EPITHELIAL TUMORS ARE CANCERS.

Q. AND DOES YOUR RESEARCH IN THAT AREA INCLUDE RESEARCH IN THE AREA OF SMALL CELL CARCINOMAS?

A. YES, IT DOES.

Q. IS A CARCINOMA A TYPE OF CANCER?

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A. YES, IT IS.

Q. AND A SMALL CELL IS A VARIATION OR A SUBTYPE OF CARCINOMA?

A. IT'S A SPECIAL TYPE OF CARCINOMA.

Q. DOCTOR, CAN YOU DESCRIBE IN A LITTLE MORE DETAIL FOR US, JUST GENERALLY, WHAT FUNCTIONS A THORACIC SURGEON PERFORMS IN THE DIAGNOSIS OR TREATMENT OF A PATIENT.

A. WELL, MANY TIMES, HE IS THE ONE TO ESTABLISH THE DIAGNOSIS. HE IS THE ONE TO HAVE SEEN THE PATIENT AFTER SOMETHING HAS BEEN DISCOVERED, AND HIS CHARGE IS TO ESTABLISH A DIAGNOSIS, TO FIND OUT WHAT THE PROBLEM IS, AND IN THE CASE OF A TUMOR, TO STAGE IT SO YOU KNOW HOW FAR THAT PROBLEM HAS GONE, AND TO FORMULATE A PLAN OF THERAPY WHICH MAY OR MAY NOT INVOLVE OPERATING AND TAKING IT OUT.

Q. ARE THERE TOOLS OR PROCEDURES AVAILABLE TO YOU TO HELP YOU MAKE THOSE DECISIONS?

A. OH, YES, THERE ARE.

Q. WHAT ARE THEY?

A. WELL, DEPENDING UPON WHERE THE TUMOR IS AND WHERE IT'S LOCATED, AND WHAT YOUR SUSPICION OF WHAT THAT IS, WHAT THAT TUMOR REPRESENTS, YOU COULD PUT A NEEDLE INTO IT AND TAKE OUT SOME CELLS. YOU COULD PUT A NEEDLE INTO THE SIDE AND TAKE OUT SOME FLUID.

YOU COULD PASS A SCOPE DOWN -- FOR INSTANCE, IN THE CASE OF LUNG CANCER -- AND SCRAPE SOME CELLS FROM THE SURFACE OF THE WINDPIPE, OR TAKE SOME MINUTE BIOPSIES.

THOSE THINGS CAN BE DONE QUITE EASILY, AND USUALLY AS AN OUTPATIENT, WITH LOCAL ANESTHETIC, OR YOU

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COULD GO ON TO MORE INVASIVE PROCEDURES.

Q. IS THE PROCEDURE YOU JUST DESCRIBED SOMETHING KNOWN AS A BRONCHOSCOPY?

A. THE SCOPE DOWN THE WINDPIPE AND OBTAINING SAMPLES IS A BRONCHOSCOPY, YES.

Q. IN TERMS OF DIAGNOSING TUMORS THAT START IN THE LUNG, HOW USEFUL IS BRONCHOSCOPY?

A. WELL, IT'S USUALLY THE FIRST TOOL THAT IS USED. IT'S VERY USEFUL.

Q. IN PATIENTS WHO HAVE SMALL CELL CARCINOMA OF THE LUNG, SMALL CELL CARCINOMA THAT STARTS IN THE LUNG, IN YOUR EXPERIENCE, HOW OFTEN CAN YOU DEMONSTRATE THAT USING A BRONCHOSCOPE?

A. IN THE VAST MAJORITY OF CASES, YOU CAN ESTABLISH

THE DIAGNOSIS OF SMALL CELL CARCINOMA BY PASSING THE BRONCHOSCOPE AND OBTAINING SAMPLES THAT WAY.

Q. ARE THERE OTHER ABNORMALITIES THAT YOU CAN OBSERVE USING A BRONCHOSCOPE THAT MIGHT HELP YOU FORM A DIAGNOSIS ABOUT A PATIENT'S CANCER?

A. WELL, CERTAINLY, YOU CAN LOCATE WHERE THE PATHOLOGY IS. SMALL CELL CARCINOMA OF THE LUNG IS A VERY AGGRESSIVE TUMOR, AND SOMETIMES, EVEN THOUGH IT IS SEEN IN THE LUNG -- AND SOMETIMES IT CAN BE QUITE LARGE AND OBVIOUS ON A CHEST X-RAY -- IT CAN GROW UNDER THE LINING OF THE LUNG, SO THAT SOMETIMES THE FINDINGS BY X-RAY AND THE GROSS FINDINGS ARE QUITE OBVIOUS.

BUT SOMETIMES, THE DIAGNOSIS CAN'T BE ESTABLISHED SIMPLY BY SCRAPING THE SURFACE OF THE WINDPIPE BECAUSE THE

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TUMOR GOES ALL AROUND THE WINDPIPE AND UNDER, AROUND THE LINING OF THE LUNG.

Q. IN THOSE SITUATIONS, ARE THERE OTHER ABNORMALITIES THAT CAN BE OBSERVED OR CORRELATED WITH THE PATHOLOGY, AS IT WERE?

A. THE AIRWAY CAN BE NARROWED. THE AIRWAY CAN BE COLLAPSED. THE AIRWAY CAN BE COMPROMISED AND SECRETIONS CAN BUILD UP BEHIND IT.

SO YOU HAVE A PNEUMONIA COMPLICATING THE PRESENCE OF THAT CANCER.

Q. IS AN AIRWAY --I WANT TO KEEP OUR TERMS STRAIGHT -- IS "AIRWAY" A MORE GENERAL OR LAYMAN'S TERM FOR BRONCHUS OR BRONCHI?

A. WELL, THE AIRWAY CONSISTS OF THE TRACHEA, RUNNING FROM THE VOICE BOX DOWN TO THE CENTER OF THE CHEST. FROM THAT POINT, IT BREAKS INTO BRONCHI, ONE MAIN STEM BRONCHUS TO EACH SIDE, AND THERE, JUST LIKE THE BRANCHES OF A TREE, WITH A SPECIFIC BRANCHING SYSTEM, IT FEEDS OFF INTO ALL THE PARTS OF THE LUNG. THAT'S ALL PART OF THE AIRWAY.

Q. WHAT USE DOES A SURGEON MAKE OF X-RAYS OR CT SCANS IN TRYING TO DIAGNOSE DISEASE OR TO DETERMINE WHERE IN THE BODY IT EXISTS?

A. OH, IT'S PIVOTAL.

Q. TELL US HOW YOU USE THEM.

LET ME BACK UP FOR A MINUTE.

THERE ARE DOCTORS, I TAKE IT, WHO SPECIALIZE IN INTERPRETING OR DESCRIBING THINGS THAT ARE SEEN ON X-RAYS OR CT SCANS?

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A. YES, THERE ARE.

Q. AND THEY KNOWN AS RADIOLOGISTS?

A. THAT'S RIGHT.

Q. BUT AS A SURGEON, ARE YOU ALSO REQUIRED, ON A DAY-TO-DAY BASIS, TO READ AND INTERPRET X-RAYS AND CT SCANS?

A. YES, ABSOLUTELY.

Q. IN WHAT INSTANCES AND HOW DO YOU USE THEM?

A. WELL, MANY TIMES, WE LOOK AT X-RAYS EVEN WITHOUT THE X-RAY REPORT. I LOOK EVERY DAY AT X-RAYS THAT HAVE NOT YET BEEN READ BY THE RADIOLOGIST.

WHEN A PATIENT IS IN THE HOSPITAL AND THEY'VE HAD AN OPERATION, THEY GET A CHEST X-RAY. NINE TIMES OUT OF 10, I SEE THAT X-RAY BEFORE A RADIOLOGIST HAS SEEN IT.

IN THE CASE OF A PATIENT WHO COMES INTO THE OFFICE WITH A CHEST X-RAY OR A CAT SCAN, I OFTEN -- AS A MATTER OF FACT, I TRY TO LOOK AT THAT X-RAY WITHOUT THE OFFICIAL INTERPRETATION. I DO THAT SO THAT I'M NOT BIASED

BY THE READING OF THE RADIOLOGIST.
BUT I THINK IT'S ALSO TRUE THAT I HAVE SPECIAL INSIGHT IN THAT I HAVE OPENED THE CHEST AND I HAVE SEEN WHAT IS IN THE CHEST. I CAN MAKE COMMENTS OR NOTES TO MYSELF ON THE LOCATION OF THIS TUMOR AND WHAT PROBLEMS IT MIGHT POSE AT THE TIME OF SURGERY THAT A RADIOLOGIST WOULDN'T EVEN CONSIDER.
SO IT'S OF PIVOTAL IMPORTANCE THAT I SEE THE X-RAY AND NOT JUST SOMEBODY'S INTERPRETATION OF THAT X-RAY.
Q. DO YOU USUALLY USE X-RAYS OR CT SCANS IN THE OPERATING ROOM WHILE YOU ARE PERFORMING SURGERY?

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A. IN EVERY CASE -- EVERY CASE, I HAVE AN X-RAY, USUALLY A CAT SCAN, MOUNTED IN THE OPERATING ROOM WHILE I'M PERFORMING THE SURGERY.
Q. AND HOW DO YOU USE IT, OR WHAT USE DO YOU MAKE OF IT?
A. SOMETIMES IT HELPS YOU TO FIND A TUMOR THAT COULD BE EXTREMELY SMALL AND IN THE CENTER OF THE LUNG.
OTHER TIMES -- I'M GOING TOO FAST. I'M SORRY. OTHER TIMES, IT SIMPLY CAN BE USED TO CORRELATE WITH UNEXPECTED FINDINGS AT THE TIME OF SURGERY. YOU CAN LOOK BACK AT THE X-RAY AND SHARPEN YOUR SKILLS ON READING THE X-RAY BY VIRTUE OF FINDING SOMETHING THAT WAS MISSED BEFORE.
Q. HOW MANY -- I DON'T KNOW THE RIGHT WORDS, WHETHER IT'S SURGERIES OR SURGICAL PROCEDURES -- HOW MANY SURGERIES, CHEST SURGERIES DO YOU PERFORM EACH YEAR?
A. PROBABLY ON THE ORDER OF 200 TO 250.
Q. AND DO YOU SEE OR DIAGNOSE A FAIR AMOUNT OF LUNG CANCER EACH YEAR?
A. OH, YES.
Q. HOW MANY CASES EVERY YEAR OF CANCER THAT ACTUALLY STARTS GROWING IN THE LUNG DO YOU DIAGNOSE?
A. PROBABLY BETWEEN 50 AND 80 CASES A YEAR.
Q. AND WHEN YOU HAVE CASES LIKE THAT, HOW DO YOU TYPICALLY DIAGNOSE THEM?
A. SOMETIMES THEY ARRIVE WITH A DIAGNOSIS ALREADY PROVIDED FROM THE REFERRING DOCTOR. SOMETIMES THEY HAVE ALREADY ESTABLISHED A DIAGNOSIS AND THEY ARE SENT TO ME FOR OTHER REASONS.

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BUT IF I HAVE TO ESTABLISH THE DIAGNOSIS, I WOULD PERFORM THE APPROPRIATE PROCEDURE, WHICH OFTEN IS THE BRONCHOSCOPY.
Q. WHAT IS THE MOST COMMON TYPE OF -- ARE THERE DIFFERENT TYPES OF CANCER THAT START IN THE LUNG?
A. YES, THERE ARE.
Q. WHAT IS THE MOST COMMON TYPE?
A. ADENOCARCINOMA.
Q. IS THAT A TYPE OF CANCER THAT CAN START IN OTHER PARTS OF THE BODY ALSO?
A. YES, IT CAN. THERE ARE SPECIAL FEATURES THAT SOMETIMES DIRECT YOU AS TO WHERE A CANCER STARTED.
Q. AND IS ANOTHER TYPE OF CANCER WE HAVE TALKED ABOUT KNOWN AS SMALL CELL CARCINOMA?
A. THAT'S RIGHT.
Q. THAT IS A DIFFERENT TYPE OF CANCER THAN ADENOCARCINOMA?
A. THAT'S RIGHT.
Q. DO YOU SEE PEOPLE WITH SMALL CELL CARCINOMA?
A. OH, YES.

Q. AND DO YOU SEE PEOPLE WITH SMALL CELL CARCINOMA THAT ACTUALLY STARTS IN THE LUNG?
A. OH, YES.
Q. HOW DO YOU DETERMINE IN ONE OF YOUR PATIENTS WHETHER THEY HAVE A CANCER THAT STARTED IN THE LUNG AS OPPOSED TO IT STARTED SOMEWHERE ELSE AND PERHAPS SPREAD TO THE LUNG?
LET ME BACK UP.

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A. SURELY.
Q. ARE THERE TUMORS, DOCTOR, THAT YOU CAN FIND IN THE LUNG THAT START SOMEWHERE ELSE IN THE BODY AND SPREAD TO THE LUNG?
A. YES.
Q. HOW OFTEN, IN YOUR EXPERIENCE, DOES THAT OCCUR?
A. QUITE COMMONLY.
Q. AND IS THERE AN ANATOMICAL OR A PATHOLOGICAL EXPLANATION FOR THAT?
A. WELL, IT'S THE NATURE OF CANCER THAT CANCER CELLS ARE SHED FROM ITS PRIMARY SITE AND SPREAD THROUGH THE BLOOD SYSTEM, THE CIRCULATION, AND ESTABLISHES, IF YOU WISH, PERIPHERAL COLONIES THROUGHOUT THE BODY.
THE LUNG IS THE FAVORITE SITE.
Q. FOR A CANCER THAT STARTED SOMEWHERE ELSE TO ESTABLISH ITSELF?
A. THAT'S CORRECT.
Q. IS THAT A SECONDARY OR --
A. OR A METASTASIS IN THE LUNG.
Q. NOW, IN YOUR PRACTICE, HOW DO YOU DETERMINE WHETHER A CANCER STARTED IN THE LUNG OR STARTED SOMEWHERE ELSE AND SPREAD TO THE LUNG, IF YOU FIND THE TUMOR IN THE LUNG?
A. WELL, USUALLY, THERE IS A HISTORY OF A PATIENT WHO HAS ALREADY HAD A DIAGNOSIS OF CANCER ELSEWHERE ESTABLISHED. SAY, FOR INSTANCE, A PATIENT WHO HAD A BOWEL CANCER RESECTED THREE YEARS AGO, AND THEY END UP WITH A NODULE, OFTEN MORE THAN ONE, IN THE LUNG THAT APPEAR.

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Q. CAN I INTERRUPT.
WHAT DO YOU MEAN BY "RESECTED"?
A. TAKEN OUT, OPERATED UPON, AND COMPLETELY REMOVED FROM THE ORIGINAL SITE.
Q. I'M SORRY I INTERRUPTED YOU.
A. SOMETIMES THERE IS NO HISTORY OF A CANCER ELSEWHERE, AND IT CAN BE SOMEWHAT OF A SURPRISE THAT IT'S A SOLITARY LESION. YOU CAN THINK THAT IT PROBABLY WAS ARISING IN THE LUNG, BUT WHEN YOU SEND IT DOWN TO THE PATHOLOGIST, HE SAYS, BASED ON WHAT HE SEES UNDER THE MICROSCOPE, THAT "THIS LOOKS LIKE KIDNEY CANCER," FOR INSTANCE.
Q. CANCERS LOOK DIFFERENTLY UNDER THE MICROSCOPE, DEPENDING ON WHERE IN THE BODY THEY START?
A. YES AND NO. SOME OF THEM HAVE A VERY CHARACTERISTIC PATTERN, AND OTHERS, IT IS LESS HELPFUL.
Q. WITH RESPECT TO SMALL CELL CARCINOMA, IS THAT A TYPE OF CANCER THAT CAN START IN A VARIETY OF LOCATIONS WITHIN THE BODY?
A. YES, IT CAN.
Q. WHERE GENERALLY IN THE BODY CAN A SMALL CELL CANCER START?
A. THE MOST LIKELY SITE, THE MOST COMMON SITE FOR SMALL CELL CARCINOMA TO ARISE IS THE LUNG, BUT IT HAS BEEN

FOUND THROUGHOUT THE BODY. IT HAS BEEN FOUND TO ARISE IN THE SKIN. IT'S BEEN FOUND TO ARISE IN THE VOICE BOX. IT'S BEEN FOUND TO ARISE IN THE THYMUS. IT'S BEEN FOUND TO ARISE IN THE STOMACH AND THE LARGE BOWEL. IT'S BEEN FOUND TO ARISE IN THE OVARY AND IN THE GENITOURINARY TRACT.

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Q. IS THERE ANY WAY TO DETERMINE, BY LOOKING AT A SMALL CELL CARCINOMA UNDER THE MICROSCOPE, WHETHER OR IF IT STARTED IN ANY PARTICULAR PART OF THE BODY?

A. NO.

Q. HOW IS IT THEN THAT WHAT -- STRIKE THAT.

WHAT ARE THE THINGS THAT YOU FIND IN A PATIENT WHO HAS A SMALL CELL CARCINOMA THAT ACTUALLY STARTED IN THE LUNG?

A. ARE YOU ASKING FOR A CLINICAL PICTURE HERE?

Q. CORRECT. TELL US WHAT YOU MEAN BY "CLINICAL PICTURE."

A. WELL, THE CLINICAL PICTURE IS THE WAY THAT THE PATIENT PRESENTS THEIR STORY AND WHAT YOU FIND ON EXAMINING THE PATIENT.

THE STORY OFTEN, UNFORTUNATELY, IS THAT THE CANCER HAS ALREADY SPREAD OUTSIDE THE CHEST BY THE TIME YOU DISCOVER IT. THREE-QUARTERS OF THE TIME, A SMALL CELL CARCINOMA WHICH AROSE IN THE LUNG HAS ALREADY SPREAD OUTSIDE THE CHEST.

Q. TO WHERE?

A. OFTEN, IT'S TO SITES LIKE THE BRAIN, AND THE PATIENT MAY PRESENT WITH BLURRED VISION OR UNSTEADINESS. THEY CAN PRESENT WITH THE TUMOR ALREADY SPREAD TO THE LIVER AND HAVE ASSOCIATED NAUSEA, FEELING SICK, LOSING WEIGHT.

THEY CAN HAVE THE TUMOR STILL CONFINED TO THE CHEST, BUT CAUSING COMPRESSION OF BLOOD VESSELS IN THE CHEST OR INVADING NERVES IN THE CHEST. ONE FAVORITE FOR IT TO PRESENT IS WITH SOME UNEXPLAINED HOARSENESS.

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Q. AND WHAT DO YOU MEAN BY "HOARSENESS"?

A. WELL, THE VOICE IS WEAK, AND IN FACT, THE VOICE SOMETIMES CRACKS.

IN THIS PARTICULAR SCENARIO THAT I'M PRESENTING, ONE OF THE NERVES TO THE VOICE BOX IS PARALYZED, MEANING THAT ONE OF THE VOCAL CORDS IS PARALYZED, SO ONLY ONE VOCAL CORD WORKS, AND THAT GIVES A PATIENT A CHARACTERISTIC TYPE OF HOARSENESS.

Q. IS THAT SOMETHING THAT RESULTS FROM SOME KIND OF PATHOLOGICAL OCCURRENCE WITHIN THE CHEST?

A. I WAS DESCRIBING THAT IN THE SETTING OF A SMALL CELL CARCINOMA OF THE LUNG THAT HAS ADVANCED IN THE CHEST.

Q. WHAT OTHER -- WHAT OTHER FINDINGS DO YOU TYPICALLY SEE IN A PATIENT WHO HAS SMALL CELL CARCINOMA THAT ACTUALLY BEGINS OR BEGAN IN THE LUNG?

A. ARE YOU ASKING FOR OTHER SITES OF SPREAD OF THE SMALL CELL CARCINOMA?

Q. WELL, LET ME ASK YOU THAT.

HOW DO YOU DEMONSTRATE THAT IT'S SPREAD TO OTHER PARTS OF THE BODY, OR HOW DO YOU KNOW IT HAS SPREAD?

A. WELL, THE FIRST THING YOU DO IS TAKE A HISTORY FROM THE PATIENT. YOU ASK THEM HOW THEY'RE FEELING. AND IF THEY SAY THEY'RE HAVING BLURRED VISION, THEN, OBVIOUSLY, YOUR EXAMINATION WOULD BE DIRECTED TOWARDS SOMETHING GOING ON WITH THE BRAIN OR THE EYES.

IF THEY'RE EXPLAINING THAT THEIR VOICE IS HOARSE,

THEN YOUR EXAMINATION WOULD BE DIRECTED TOWARD WHAT COULD BE CAUSING A HOARSE VOICE.

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BUT IF YOUR SUSPICION SOMEWHERE ALONG THE LINE IS THAT THERE'S SOMETHING GOING ON IN THE CHEST, SOONER OR LATER YOU ARE GOING TO GET A CHEST X-RAY, EITHER BASED ON THE CLINICAL FINDINGS, OR EVEN IN THE ABSENCE OF CLINICAL FINDINGS.

Q. AND WHAT WOULD YOU TYPICALLY FIND ON A CHEST X-RAY IN A PATIENT WHO HAS A SMALL CELL CANCER THAT HAS STARTED IN THE LUNG?

A. WELL, TYPICALLY, YOU'LL FIND A CENTRAL MASS IN THE LUNG.

Q. WHEN YOU SAY YOU FIND IT, YOU MEAN YOU SEE IT ON THE X-RAY?

A. YOU SEE IT ON THE X-RAY.

Q. WHAT ABOUT THE CT SCAN; WHAT DO YOU TYPICALLY FIND ON A CT SCAN?

A. WELL, IF YOU SUSPECT SOMETHING IS GOING ON BY THE CHEST X-RAY, OR EVEN FROM THE CLINICAL STORY, YOU'LL PROCEED TO GET A CAT SCAN OR A CT SCAN.

"CT" STANDS FOR COMPUTERIZED TOMOGRAPHY, WHERE YOU CAN SEE IN GREAT DETAIL THE RELATIONSHIP IN THE VARIOUS STRUCTURES OF THE CHEST. AND A CAT SCAN WOULD HELP TO PINPOINT WHERE THE MASS IS, WHAT IT'S ADJACENT TO, WHAT OTHER PROBLEMS ARE ASSOCIATED WITH THIS MASS, AND IT WILL HELP TO DETERMINE SUCH THINGS AS, CAN YOU GET IT OUT.

Q. IN YOUR EXPERIENCE IN PATIENTS WHO HAVE A SMALL CELL CANCER THAT STARTS IN THE LUNG, ARE THERE ABNORMALITIES IN THE LUNG FIELDS ON THE CT SCAN?

A. OH, YES. ABSOLUTELY.

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Q. AND THEN, WHAT ELSE DO YOU FIND TYPICALLY BEYOND THE X-RAYS, THE CT SCANS AND THE HISTORY?

A. WELL, IF YOU SUSPECT THAT THERE IS A LUNG PROBLEM, THEN YOU HAVE TO GO AHEAD AND ESTABLISH A DIAGNOSIS OF THAT.

USUALLY, WHEN THE CAT SCAN IS PERFORMED, IT WILL HELP TO A POINT WHERE IN THE LUNG THAT IS, AND YOU WOULD OFTEN PROCEED WITH A BRONCHOSCOPY.

Q. AND THAT'S THE PROCEDURE WE TALKED ABOUT EARLIER?

A. THAT IS THE PROCEDURE WE TALKED ABOUT EARLIER, WHEREUPON A SMALL FLEXIBLE SCOPE IS PASSED DOWN THE WINDPIPE INTO THE AREA OF CONCERN.

Q. AND WHAT HAPPENS THEN? WHAT USE DO YOU MAKE OF THAT TOOL IN ORDER TO CREATE OR ARRIVE AT A DIAGNOSIS OF A CANCER THAT ACTUALLY STARTED IN THE LUNG?

A. WELL, USUALLY, AT THAT TIME, YOU TAKE SAMPLES OF THE LINING OF THE WINDPIPE, WHICH CAN BE DONE EITHER BY PASSING A LITTLE BRUSH DOWN THROUGH THE SCOPE, WHICH IS ABOUT THE SIZE OF THE DIAMETER OF A PEN OR A PENCIL, AND YOU TAKE A BRUSHING. YOU SCRAPE SOME CELLS FROM THE SURFACE OF THE LINING OF THE WINDPIPE.

YOU CAN ALSO OBTAIN BIOPSIES, WHICH ARE LITTLE TINY MILLIMETER PIECES OF TISSUE, AND YOU CAN SEND THOSE TO PATHOLOGY AS WELL.

YOU CAN ALSO IRRIGATE, THAT IS, WASH WITH SALINE, SALT AND WATER, THE LINING OF THE WINDPIPE, AND OBTAIN FURTHER SAMPLES THERE FROM CELLS THAT ARE BEING SHED FROM THE SURFACE OF THE WINDPIPE IN ORDER TO ESTABLISH A

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DIAGNOSIS.

Q. DOCTOR, HOW USUAL OR HOW TYPICAL -- STRIKE THAT. HOW UNUSUAL WOULD IT BE TO CONCLUDE -- STRIKE THAT.

IN YOUR EXPERIENCE, HOW OFTEN DO YOU CONCLUDE OR DETERMINE THAT A PATIENT HAS A CANCER THAT STARTED IN HIS OR HER LUNG WHEN THERE'S NO EVIDENCE OF AN ABNORMALITY ON THE LUNG FIELDS IN THE CAT SCAN AND THERE'S NO BIOPSY OBTAINED FROM A BRONCHOSCOPY THAT IS POSITIVE FOR CANCER CELLS?

A. WELL, IT CAN HAPPEN. BUT USUALLY, LUNG CANCER, YOU CAN FIND SOMETHING IN THE LUNG. IF YOU DON'T SEE IT ON A PLAIN X-RAY, YOU MAY FIND SOMETHING SMALLER, SAY, THE SIZE OF A PEA BY CAT SCAN. IF THERE'S NOTHING ON CHEST X-RAY OR CAT SCAN, I THINK IT'S LESS LIKELY, EVEN MORE LESS LIKELY. IN FACT, IT WOULD BE VERY UNCOMMON. NOT UNHEARD OF, BUT VERY UNCOMMON.

IF YOU ADD TO THAT BRONCHOSCOPY OR SPUTUM CYTOLOGY, YOU KEEP GOING DOWN THE LIST TO LOOK HARDER AND HARDER FOR THINGS IN THE LUNG, AND THEY'RE ALL COMING UP NEGATIVE, I THINK THAT SOONER OR LATER, YOU HAVE TO ASK YOURSELF WHETHER THERE WAS ANYTHING GOING ON IN THE LUNG IN THE FIRST PLACE.

Q. NOW, DOCTOR, HAVE YOU LOOKED AT MEDICAL RECORDS AND X-RAYS AND CT SCANS RELATING TO MS. HENLEY, PATRICIA HENLEY?

A. YES, I HAVE.

Q. AND YOU'VE DONE THAT IN ORDER TO FORM AN OPINION, IF YOU CAN, ABOUT WHERE HER CANCER MIGHT HAVE STARTED?

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A. YES, I HAVE.

Q. WITH SPECIFIC REFERENCE TO THE LIKELIHOOD THAT IT DID OR DID NOT START IN THE LUNG?

A. YES.

Q. CAN YOU DESCRIBE FOR ME WHAT IT WAS YOU HAVE REVIEWED.

A. WELL, I REVIEWED A SERIES OF CHEST X-RAYS, WHICH INCLUDED A CHEST X-RAY FROM THE FRONT AND SIDE THAT WAS PERFORMED BEFORE HER SURGERY IN JANUARY 1998. AND I BELIEVE IT WAS JANUARY THE 3RD.

I ALSO REVIEWED A CAT SCAN THAT WAS DONE ON OR ABOUT THAT SAME TIME, BEFORE HER OPERATION.

Q. AND I HAVE THOSE.

IF WE PUT THOSE ON THE BOX, WOULD YOU BE ABLE TO DESCRIBE FOR US YOUR IMPRESSIONS OF THOSE FILMS, AND COMPARE AND CONTRAST THEM TO WHAT YOU TYPICALLY FIND IN PATIENTS WHO HAVE A CANCER THAT STARTS IN THEIR LUNG?

A. SURELY.

MR. OHLEMEYER: MAY I, YOUR HONOR?

THE COURT: SURE.

MR. OHLEMEYER: Q. ACTUALLY, DOCTOR, WHY DON'T YOU STEP DOWN AND TAKE A LOOK AT THAT, AND I'LL SET THIS UP.

MS. CHABER: WE'LL SEE IF HE DOES BETTER AT MOVING THAT THAN I DO (REFERRING TO VIEW BOX).

THE COURT: HE'S NOT OFF TO A GOOD START.

MR. OHLEMEYER: NOT BAD.

THE WITNESS: ARE THE FILMS IN HERE?

MR. OHLEMEYER: YES.

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Q. AND WHAT YOU HAVE TO DO FOR US, DOCTOR, IS IDENTIFY WHAT IT IS YOU'RE PUTTING ON THE BOX FOR US.

A. ALL RIGHT.
Q. WHY DON'T YOU GO AHEAD, DOCTOR, AND DESCRIBE FOR US WHAT YOU PUT ON THE LIGHT BOX.
A. WHAT I PUT UP HERE IS A CHEST X-RAY TAKEN FROM THE FRONT AND FROM THE SIDE OF MS. PATRICIA HENLEY, DONE ON JANUARY THE 3RD, 1998. THIS WAS DONE LOOKING LIKE THIS (INDICATING).
AND THIS WAS DONE AS A SIDE VIEW. REMEMBER, THE HANDS ARE UP OVER THE HEAD, SO YOU DON'T SEE THE ARMS. THEY ARE UP HERE (DEMONSTRATING).
THIS IS THE CHEST, THIS IS THE FRONT, THIS IS THE BACK, THIS IS THE TOP, THIS IS THE BOTTOM (DEMONSTRATING).
AND ON THESE FILMS, YOU CAN SEE THAT THERE IS AN ABNORMALITY RIGHT HERE (INDICATING).
(HANDS RAISED)
MR. OHLEMEYER: EXCUSE ME, DOCTOR. YOU ARE GOING TO HAVE TO STAND A LITTLE TO THE SIDE SO THAT PEOPLE CAN SEE.
THE COURT: JUST SO YOU KNOW, A COUPLE OF OUR JURORS ARE SITTING IN THE FRONT ROW.
THE WITNESS: OH, FINE.
THE COURT: AND THEY HAVE BEEN TOLD TO RAISE THEIR HANDS IF THEY CAN'T SEE, AND THEY WERE RAISING THEIR HANDS.
THE WITNESS: THANK YOU.
I'M STARTING WITH THESE TWO X-RAYS HERE. THIS IS

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A FRONT VIEW AND THIS IS A SIDE VIEW, ON JANUARY THE 3RD.
AND THE ABNORMALITY IS SEEN IN SILHOUETTE RIGHT HERE (INDICATING). PRESUMABLY, IT GOES IN HERE, AND IT'S NOT LIMITED TO THAT LINE, BUT THAT LINE IS ABNORMAL.
EVERYTHING ELSE ON THAT CHEST X-RAY LOOKS NORMAL. THIS IS THE RIGHT LUNG, THIS IS THE LEFT LUNG, THIS IS THE HEART, THE LEFT HEMIDIAPHRAGM, THE RIGHT HEMIDIAPHRAGM (INDICATING).
THERE IS NO FLUID. THERE'S NO MASS. THERE IS NO INFILTRATE.
AND THIS IS VIRTUALLY THE ONLY ABNORMALITY THAT I CAN SEE ON THAT FILM.
MR. OHLEMEYER: Q. LET ME ASK YOU THIS, DOCTOR: IS THAT ABNORMAL, INSIDE THE LUNG?
A. I CAN'T TELL, BASED ON THIS ONE VIEW OF THIS ONE X-RAY. IT COULD BE, BASED ON THIS X-RAY.
THIS IS THE SIDE VIEW, THIS IS THE FRONT, AND THIS IS THE BACK.
Q. YOU ARE REFERRING TO THE SECOND FILM?
A. CORRECT. THIS IS THE BACKBONE IN BACK. THIS IS THE HEART IN FRONT (INDICATING).
AND YOU CAN SEE THE WINDPIPE COMING RIGHT DOWN HERE (INDICATING). AND THIS IS THE MASS IN THIS REGION, ON TOP OF THE HEART, IF YOU WISH.
BUT THAT MASS, YOU CAN SEE THAT THERE IS A WHITENESS TO THIS IN FRONT OF THE WINDPIPE AS WELL.
Q. WHAT DOES THAT TELL YOU WITH RESPECT TO WHERE IT MIGHT BE LOCATED?

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A. IT IS IN THE HILUM OF THE LUNG. IT IS IN THE ROOT OF THE LUNG.
THERE ARE A LOT OF THINGS THAT GO ON THERE. IT IS POSSIBLE THAT THIS IS A LUNG MASS, BUT IT WOULD BE UNUSUAL FOR A LUNG MASS TO INVOLVE THIS REGION HERE

(INDICATING).
Q. LET ME STOP YOU THERE.
AT THIS POINT IN TIME, ARE YOU FAMILIAR WITH WHAT MS. HENLEY'S SYMPTOMS WERE AT THE TIME SHE GOT THE X-RAY?
A. I BELIEVE SHE WAS FEELING UNWELL. SHE HAD A COUGH. SHE, IN FACT, I THINK COUGHED UP BLOOD ON OCCASION.
Q. IS THERE ANYTHING ABOUT THOSE SYMPTOMS, BASED ON THAT X-RAY, THAT WOULD LEAD YOU TO BELIEVE THAT THAT WAS A TUMOR THAT WAS ACTUALLY INSIDE THE LUNG, JUST BASED ON WHAT YOU KNEW AT THAT POINT IN TIME?
A. IT CAN'T BE RULED OUT, BASED ON THESE X-RAYS.
HOWEVER, WHEN SOMEONE IS COUGHING UP BLOOD, I THINK YOU HAVE TO THINK IN TERMS OF SOMEONE HAVING A PROBLEM WITH THE WINDPIPE, AND CANCER IS COMMON.
I DON'T THINK IT'S UNREASONABLE AT THIS TIME TO THINK THAT CANCER OF THE LUNG HAS TO BE, SHALL WE SAY, IN THE DIFFERENTIAL DIAGNOSIS OF A PATIENT OF THINGS THAT COULD BE.
Q. IT CERTAINLY WOULD BE SOMETHING THAT A DOCTOR, IF HE HAD A PATIENT WITH THOSE SYMPTOMS IN THAT CHEST X-RAY, WOULD BE SUSPICIOUS OF?
A. ABSOLUTELY.
Q. WOULD IT BE ENOUGH FOR YOU TO DIAGNOSE LUNG

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CANCER AT THAT POINT?
A. WELL, THERE IS DIAGNOSIS AND DIAGNOSIS. IT'S ENOUGH FOR ME TO SAY IT'S HIGH ON THE LIST OF THINGS THAT SHE HAS. BUT OBVIOUSLY, YOU DON'T WANT TO PROCEED WITH ANY THERAPY BASED ONLY ON THAT HUNCH AT THIS TIME.
Q. SO WHAT WOULD -- WAS THERE SOMETHING ELSE THAT WAS THEN DONE AT OR ABOUT THAT TIME?
A. I BELIEVE A CAT SCAN WAS DONE ABOUT THE SAME TIME. A CAT SCAN IS DONE WITH A PATIENT LYING ON A TABLE AND BEING FED THROUGH A MACHINE THAT HAS A RING IN IT. AND AS THAT RING -- AS THE PATIENT IS BEING FED THROUGH THE RING ELECTRONICALLY, THE BODY IS BEING SLICED THIS WAY (INDICATING).
SO YOU ARE SEEING SLICES OF THE BODY, AND EACH SLICE IS ABOUT THE THICKNESS OF A SLICE OF BREAD, 10 METERS. AND THEN IT'S MOUNTED -- THAT IMAGE, THAT INFORMATION ELECTRONICALLY IS SENT THROUGH A COMPUTER AND SCRAMBLED AND PUT BACK INTO AN ORDINARY X-RAY FILM, AS IF WE HAD SECTIONED THE BODY AND LOOKED UP FROM BELOW WITH THE EYES OF AN X-RAY MACHINE.
SO WHEN THAT HAPPENS, THIS IS THE IMAGE THAT YOU GET THROUGH THE NECK (INDICATING). THIS IS THE BACK, THIS IS THE FRONT, THIS IS THE RIGHT SIDE, THIS IS THE LEFT SIDE.
AND JUST AS ON THE PLAIN X-RAY, AIR IS BLACK AND BONES ARE WHITE. THIS IS BACKBONE, THIS IS THE SHOULDER SOCKET ON THE RIGHT SIDE, THIS IS THE SHOULDER SOCKET ON THE LEFT SIDE, THE COLLARBONE ON THE RIGHT SIDE, THE COLLARBONE

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ON THE LEFT SIDE, AND THIS IS THE WINDPIPE. THIS IS STILL UP IN THE NECK, ABOVE THE BREASTBONE AT THIS POINT.
EACH SECTION GOING DOWN HERE IS ANOTHER SLICE LOWER. AT THIS LEVEL HERE, FOR INSTANCE, YOU CAN JUST SEE THE TOP OF THE BREASTBONE. THIS IS THE RIGHT LUNG, THIS IS THE LEFT LUNG. THESE ARE THE BLOOD VESSELS IN THE CENTER OF THE CHEST. THIS IS THE BACKBONE AND SHOULDER BLADE ON THE RIGHT SIDE AND THE LEFT SIDE.

AT THIS LEVEL HERE, YOU JUST START TO SEE SOMETHING THAT SHOULDN'T BE THERE.

Q. LET ME ASK YOU THIS: WHAT IMAGE IS THAT, FOR THE RECORD --

A. IMAGE 6-C.

Q. -- DOCTOR.

A. 6 PLUS C.

Q. HAVE YOU HAD A DEMONSTRATIVE EXHIBIT PREPARED THAT ACTUALLY HAS THESE PICTURES ON IT?

A. YES, I DO.

Q. WOULD IT BE HELPFUL IN DESCRIBING WHAT'S GOING ON TO USE IT TO DEMONSTRATE THAT?

A. YES, IT WOULD.

MR. OHLEMEYER: YOUR HONOR, I'D LIKE TO MARK THIS AS DEFENDANT'S NEXT IN ORDER.

THE CLERK: DEFENDANT'S EXHIBIT 2802.

(DOCUMENT MORE PARTICULARLY DESCRIBED IN THE INDEX MARKED FOR IDENTIFICATION DEFENDANT'S EXHIBIT # 2802)

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MR. OHLEMEYER: Q. AS WE GET STARTED HERE, DOCTOR, WHY DON'T YOU -- JUST SO WE CAN ORIENT IT, IF YOU WOULD WRITE NEXT TO EACH OF THESE PICTURES WHICH PART OF THAT CT SCAN IT RELATES TO.

A. DO YOU WANT ME TO MARK ON IT?

Q. YES, UNLESS YOU HAVE AN OBJECTION?

MS. CHABER: I DON'T HAVE ANY OBJECTION.

MR. OHLEMEYER: YES.

MS. CHABER: THIS IS FOR DEMONSTRATIVE PURPOSES?

MR. OHLEMEYER: CORRECT.

THE WITNESS: THIS IS IMAGE 6 PLUS C, 7 PLUS C, 8 PLUS C (MARKING EXHIBIT).

MR. OHLEMEYER: Q. YOU'VE NUMBERED SIX THROUGH 12 PLUS C?

A. THAT'S CORRECT.

Q. AND JUST SHOW US ON THE X-RAY OR THE CT SCAN FILMS WHICH ONES YOU'RE TALKING ABOUT.

A. I'M TALKING ABOUT THESE IMAGES, 6, 7, 8, 9, 10, 11, 12 AND 13. 6, 7, 8, 9, 10, 11, 12 AND 13. THESE ARE OBVIOUSLY ENLARGED.

Q. AND WHAT IS IT ABOUT -- WHAT CAN YOU TELL ABOUT WHERE MS. HENLEY'S CANCER MIGHT HAVE STARTED, BASED ON YOUR REVIEW OF THOSE CT SCANS?

A. WELL, LET ME START BY SAYING, CANCER OF THE LUNG HAS A CHARACTERISTIC APPEARANCE AND PATTERN OF SPREAD. YOU FIND SOMETHING IN THE LUNG, IN THE VAST MAJORITY OF CASES, AND WHEN IT SPREADS, IT USUALLY SPREADS TO LYMPH NODES.

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AND THOSE LYMPH NODES -- THOSE CANCERS DRAIN THROUGH CERTAIN LYMPH NODES IN A VERY PREDICTABLE WAY. NOT ENTIRELY ALL THE TIME 100 PERCENT PREDICTABLE, BUT THERE IS A MAPPING OF THE LYMPH NODES THAT ARE CHARACTERISTICALLY USED IN DRAINING THE LUNG NORMALLY, AND IT'S TO THOSE NODES THAT CANCER GOES.

Q. DO YOU SEE THAT CHARACTERISTIC PATTERN IN THIS OR THESE CT SCANS?

A. NO.

Q. CAN YOU SHOW US -- CAN YOU COMPARE AND CONTRAST THE DIFFERENCES IN THIS CT SCAN COMPARED TO THE

CHARACTERISTIC PATTERN YOU TYPICALLY SEE IN A PATIENT WHO HAS A CANCER THAT STARTED IN THE LUNG?

A. FIRST OF ALL, YOU WANT TO SEE SOMETHING IN THE LUNG AND BY CAT SCAN THAT CAN IDENTIFY SOMETHING DOWN TO THE SIZE OF A PEA, MAYBE SMALLER.

THERE IS NOTHING IN THE CAT SCAN, NOTHING TO DEMONSTRATE A MASS OR A NODULE, OR ANYTHING THAT WOULD BE THE SITE OF ORIGIN FOR A LUNG CANCER.

ON THIS, THE LYMPH NODES THAT CHARACTERISTICALLY DRAIN A LUNG CANCER ARE NOT NODES NEXT TO THAT MASS OR NODULE, AND THEN SPREAD UP THE TRACHEAL BRONCHIAL TREE IN A CHARACTERISTIC WAY.

THOSE NODES ARE LOCATED AROUND THE WINDPIPE, ALL THE WAY UP THE CENTER OF THE CHEST, AND THOSE NODES ARE USUALLY INVOLVED UNTIL THE CANCER BREAKS INTO THE SYSTEM AND ESTABLISHES SITES OUTSIDE THE CHEST.

Q. IS THERE ANY EVIDENCE IN MS. HENLEY'S CT SCANS OF

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INVOLVEMENT OF LYMPH NODES OR ABNORMALITIES IN THOSE LYMPH NODES?

A. WELL, IN FACT, THE MASS IS SO LARGE THAT IT'S ALMOST HARD TO CONCEIVE THAT IT DOESN'T INVOLVE A LYMPH NODE, IF ONLY BY DIRECT GROWTH.

DOWN HERE (INDICATING), RIGHT ON THE WINDPIPE, IT ALMOST CERTAINLY HAS BUMPED INTO A NODE. BUT THE MAJORITY OF THE MASS IS IN A REGION WHERE, CHARACTERISTICALLY, YOU MAY FIND A NODE, BUT IT DOESN'T USUALLY DRAIN THE LUNG.

Q. ARE THERE ANY LYMPH NODES THAT APPEAR TO BE ABNORMAL AS A RESULT OF THE SPREAD OF A CANCER FROM ANYWHERE IN THE BODY?

A. AS I SAY, DOWN HERE (INDICATING), WHEN IT'S VIRTUALLY BUMPING UP AGAINST THE WINDPIPE, IT HAS ENCOUNTERED AND MAYBE ENGULFED SOME LYMPH NODES.

BUT MOST OF THE OTHER LYMPH NODES IN THE CHEST THAT ARE AROUND THE WINDPIPE ARE NOT EVEN SUSPICIOUS TO BE ENLARGED.

Q. IN A TYPICAL CASE IN A CANCER THAT STARTED IN THE LUNG, WOULD YOU EXPECT TO FIND SUSPICIOUS THINGS IN THOSE LYMPH NODES?

A. YES. THEY WOULD CERTAINLY BE ENLARGED.

Q. WHAT ABOUT -- WHAT ELSE ABOUT THE APPEARANCE OF THIS TUMOR MAKES IT LOOK MORE OR LESS LIKE A TYPICAL CANCER THAT STARTED IN THE LUNG, BASED ON THE CT SCANS, IF ANYTHING?

A. WELL, FIRST OF ALL, AS I SAID, THERE'S NOTHING THAT I CAN SEE THAT'S DEFINITIVE IN THE LUNG. THIS IS

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ACTUALLY IN THE CENTER OF THE CHEST (INDICATING). IT'S AGAINST VESSELS AND THE MAIN WINDPIPE, WHICH IS A PART OF THE CHEST WE CALL THE MEDIASTINUM, THAT PART BETWEEN THE LUNGS, FROM THE THORACIC INLET TO THE DIAPHRAGM, BETWEEN THE LUNGS, WHICH INCLUDES THE HEART AND THE ESOPHAGUS AND THE WINDPIPE AND THE LYMPH NODES.

IN FRONT, YOU HAVE THE THYMUS GLAND OR RESIDUAL COMPONENTS OF THE THYMUS GLAND, AND ALL OF THOSE ARE COLLECTIVELY KNOWN AS THE MEDIASTINUM.

THIS MASS IS LOCATED IN THE MEDIASTINUM (INDICATING). BUT FURTHERMORE, IN THE MEDIASTINUM, IT HAS SPREAD TO AN AREA -- IT'S INVOLVING AN AREA OF THE MEDIASTINUM RIGHT BEHIND THE BREASTBONE AND IN FRONT OF THE VESSELS, BUT NOT AROUND THE WINDPIPE, THE MAIN WINDPIPE

HERE, WHERE YOU WOULD ORDINARILY FIND THE LYMPH NODES.
CHARACTERISTICALLY LOCATED IN THE ANTERIOR MEDIASTINUM IS THE THYMUS GLAND. SO THAT HAS TO BE SAID.
THE OTHER IS THAT THIS MASS EXTENDS, IN FACT, TO THE RIGHT OF THE MIDLINE. AT THIS POINT HERE, YOU CAN SEE AT THIS POINT THAT IT IS TO THE RIGHT OF THE MIDLINE, THE MIDLINE BEING RIGHT HERE (INDICATING).
Q. "MIDLINE" BEING WHAT? THE MIDLINE OF WHAT?
A. THE MIDLINE OF THE BODY, GOING STRAIGHT DOWN HERE (INDICATING).
SO THAT ALTHOUGH THE MAJORITY OF THE MASS IS IN THE LEFT CHEST, IT HAS GROWN SO LARGE THAT IT HAS CROSSED INTO THE RIGHT CHEST.
Q. WHAT DOES THAT HAVE TO DO, IF ANYTHING, WITH THE

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QUESTION OF WHETHER OR IF THIS WAS A TUMOR THAT STARTED IN THE LUNG?
A. WELL, IT SPEAKS TO THE FACT THAT THE THYMUS GLAND IS A MIDLINE STRUCTURE, AND THERE IS A RIGHT AND A LEFT-SIDED COMPONENT.
LYMPH NODES CHARACTERISTICALLY THAT CONTAIN CANCER WILL BE ASSOCIATED WITH OTHER LYMPH NODES, OFTEN, AT LEAST INITIALLY, AS SEPARATE NODULES, AND IN TIME WILL COALESCE, BUT SELDOM IS IT ONE MASS THAT GROWS ACROSS THE MIDLINE.
FURTHERMORE, THE CONTOUR OF THIS MASS IS EXTREMELY SMOOTH.
Q. AND WHAT DOES THE CONTOUR OF THE MASS HAVE TO DO WITH TRYING TO DETERMINE WHERE IT MIGHT HAVE STARTED?
A. WELL, THE CONTOUR IS SMOOTH, WHICH MEANS TO ME THAT IT'S RESPECTING SOME KIND OF BOUNDARY. A CANCER IN THE LUNG HAS TENTACLES, HAS CELL PROCESSES AS IT'S GROWING INTO THE SURROUNDING PORTION OF THE LUNG.
AND THIS IS AGAINST THE LUNG, BUT IT IS NOT WITHIN THE LUNG. AND IN FACT, IT HAS A SMOOTH BORDER BETWEEN WHAT IS OBVIOUSLY TUMOR AND WHAT IS OBVIOUSLY LUNG.
AND IT MAKES ME THINK THAT THERE IS SOME KIND OF CAPSULE OR NATURAL TISSUE BARRIER BETWEEN THE TUMOR AND THE LUNG ITSELF.
Q. AND WHAT'S THE SIGNIFICANCE OF THAT?
A. WELL, THE THYMUS IS A CAPSULE, AND IF THIS MASS WERE WITHIN THE LUNG, YOU WOULD EXPECT THIS MARGIN TO BE QUITE IRREGULAR. AND IF THIS MASS REPRESENTS A TUMOR IN THE

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THYMUS GLAND, IT WOULD AT LEAST INITIALLY RESPECT THAT CAPSULE BOUNDARY, UNTIL IT GROWS THROUGH.
Q. DOCTOR, HAVE YOU ALSO HAD AN ARTIST TAKE THESE X-RAYS AND PREPARE A DEMONSTRATIVE EXHIBIT THAT WOULD HELP EXPLAIN WHERE THINGS ARE LOCATED?
A. YES, I HAVE.
MR. OHLEMEYER: LET ME MARK THAT AS THE DEFENDANT'S NEXT TWO IN ORDER YOUR HONOR.
THE CLERK: DEFENDANT'S EXHIBIT 2803.
(DOCUMENT MORE PARTICULARLY DESCRIBED IN THE INDEX MARKED FOR IDENTIFICATION DEFENDANT'S EXHIBIT # 2803)
MR. OHLEMEYER: ACTUALLY, THE NEXT THREE IN ORDER.
THE CLERK: AND 2804 AND 2805.
(DOCUMENTS MORE PARTICULARLY

DESCRIBED IN THE INDEX MARKED
FOR IDENTIFICATION DEFENDANT'S
EXHIBITS # 2804 AND 2805)
THE COURT: TATSUO, ONE MINUTE AGO, DID YOU SAY 2802?
HOW DID WE GET FROM 2802 TO 2843? DID I MISHEAR?
MR. OHLEMEYER: I HAVE 03, 04, 05 HERE, YOUR HONOR.
THE COURT: I THOUGHT TATSUO SAID 2843.
THE CLERK: 2803.

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THE COURT: OKAY. 2803, 2804 AND 2805?
THE CLERK: YES.
THE COURT: I MISSED THAT.
IS THERE ANY OBJECTION TO THOSE?
MR. OHLEMEYER: THEY ARE FOR DEMONSTRATIVE PURPOSES.
THE COURT: ANY OBJECTION?
MS. CHABER: NOT FOR DEMONSTRATIVE PURPOSES.
THE COURT: OKAY. YOU MAY PROCEED.
MR. OHLEMEYER: Q. REFERRING TO THE NUMBER ON IT, DOCTOR, WHY DON'T YOU DESCRIBE FOR US WHAT IT REPRESENTS WITH RESPECT TO WHAT WE'RE SEEING ON THE X-RAY BOX.
A. THIS X-RAY (INDICATING) IS THE SAME AS THAT X-RAY. IT IS TAKEN FROM A NEGATIVE OF THIS X-RAY. IT IS THE SAME PICTURE. IT IS SLIGHTLY ENLARGED FOR THE PURPOSES OF DEMONSTRATION.
AND THIS IS A DRAWING OF THE VARIOUS STRUCTURES IN THE CHEST THAT I CAN PROJECT, BASED UPON THE FINDINGS OF THE CAT SCAN.
AND WE'LL CALL THIS THE RIGHT LUNG AND THIS IS THE LEFT LUNG, THIS IS THE HEART, THIS IS THE MAIN WINDPIPE THAT SPLITS HERE. HALF GOES TO THE RIGHT SIDE, HALF GOES TO THE LEFT SIDE. THAT IS THE MAIN BLOOD VESSEL FROM THE HEART, THE AORTA THAT FEEDS THE REST OF THE BODY. THIS IS THE MAIN BLOOD VESSEL FROM THE RIGHT SIDE OF THE HEART. THIS PART GOES TO THE RIGHT LUNG AND THIS PART GOES TO THE LEFT LUNG.
AND AT THIS POINT HERE, THE MAIN BLOOD VESSELS

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PINCH OFF. THERE IS VIRTUALLY NO BLOOD FLOWING TO THE RIGHT OR TO THE LEFT LUNG BECAUSE OF THE MASS.
THE MASS IS LOCATED RIGHT HERE. IT HAS A VERY SMOOTH MARGIN. IT IS ON TOP OF EVERYTHING. IT IS AROUND IT. IT IS BETWEEN THE BREASTBONE, WHICH IS IN FRONT OF THE EXHIBIT, AND THE WINDPIPE BACK HERE. AND THE MAIN BLOOD VESSELS IT HAS LYING RIGHT BEHIND THE BREASTBONE.
Q. CAN I INTERRUPT YOU FOR A MINUTE, DOCTOR.
OBVIOUSLY YOU WEREN'T INVOLVED IN MS. HENLEY'S DIAGNOSIS OR TREATMENT; RIGHT?
A. CORRECT.
Q. HOW IS IT THAT YOU KNOW OR CAN SAY WHERE THE MASS WAS WITH RESPECT TO THESE OTHER ORGANS?
A. WELL, YOU CAN TELL THAT FROM THE CAT SCAN AND THE CHEST X-RAY.
Q. I'M SORRY. THEN EXPLAIN FOR US WHAT OTHER SIGNIFICANT GEOGRAPHY OR ANATOMY IS THERE.
A. I'D LIKE TO SHOW THE SIDE VIEW. I THINK THAT WILL BE OF VALUE AS WELL.
Q. WHICH IS NUMBER 2804.

A. THE SIDE VIEW, THIS IS THE CHEST X-RAY TAKEN ON THE SAME DAY. AND AS BEFORE, IT HAS BEEN ENLARGED TO MATCH THE SIZE OF THE DRAWING.

AND ONCE AGAIN, THE MASS IS FOUND IN THIS REGION RIGHT HERE (INDICATING), ACCORDING TO THE MASS THAT I SEE IN THIS REGION RIGHT HERE. IT LIES OVER THE TOP OF THE VESSELS, AND IT COMES DOWN ONTO THE WINDPIPE. IT PINCHES OFF -- IN FACT, IT SURROUNDS THE BLOOD VESSEL FEEDING BLOOD

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FROM THE HEART TO THE LEFT LUNG, AND THAT HELPS TO PINPOINT WHERE THE MASS IS.

BUT NOTE ALSO THAT THERE IS A NERVE HERE THAT IS INDICATED IN YELLOW THAT RUNS BEHIND THE MASS AND BACK UP BESIDE THE WINDPIPE.

Q. WHAT NERVE IS THAT?

A. THAT IS THE LEFT RECURRENT LARYNGEAL NERVE.

Q. AND WHAT, IF ANYTHING, IS SIGNIFICANT ABOUT WHERE THE TUMOR IS COMPARED TO WHERE THE NERVE IS?

A. WELL, CHARACTERISTICALLY, THERE IS A SET OF LYMPH NODES LOCATED RIGHT ON THE NERVE. AND CHARACTERISTICALLY, THOSE NODES ARE INVOLVED IN THE DRAINAGE OF UPPER LOBE TUMORS.

Q. UPPER LOBE OF THE LUNG?

A. OF THE LUNG.

AND WHEN THAT NODE IS INVOLVED WITH CANCER, IT OFTEN EARLY ON PINCHES OFF THE NERVE. IT INVOLVES THE NERVE, IT INVADES THE NERVE.

AND THIS IS WHY I SAID WHAT I DID ABOUT A PATIENT PRESENTING WITH A HOARSE VOICE. THAT'S THE NERVE THAT I'VE BEEN REFERRING TO AS A RECURRENT LARYNGEAL PALSY.

Q. IS THERE ANY EVIDENCE ON THE CT SCANS THAT THAT NERVE IS INVOLVED OR BEING AFFECTED ABNORMALLY BY ANYTHING IN THE BODY AT THIS POINT?

A. WELL, IT CERTAINLY IS IN THE REGION. BUT THE REASON THAT I SHOWED IT SPARED IS THAT THERE WAS NOTHING IN THE CLINICAL RECORD TO INDICATE THAT THE PATIENT HAD ANY PROBLEM WITH HER VOICE.

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Q. DO CANCERS THAT BEGIN IN THE LUNG TYPICALLY NOT SPARE THAT NERVE?

A. LUNG CANCERS CHARACTERISTICALLY THAT ARE UPPER LOBE --LEFT UPPER LOBE OF THE LUNG DRAIN INTO LYMPH NODES AROUND THAT NERVE.

AND CHARACTERISTICALLY -- NOT ALWAYS, BUT USUALLY WHEN THAT NERVE -- WHEN THOSE NODES ARE INVOLVED, THEY CAN PINCH OFF THAT NERVE.

Q. LET ME ASK YOU TO ASSUME, DOCTOR, THAT THERE HAS BEEN SOME TESTIMONY IN THE CASE THAT MS. HENLEY'S VOICE -- THAT SHE PERCEIVED HER VOICE TO BE GETTING LOWER WITHIN A FEW MONTHS OF THE TIME SHE WAS DIAGNOSED WITH HER CANCER.

IS THAT THE TYPE OF HOARSENESS YOU WERE DESCRIBING?

A. NO. I'M DESCRIBING A HOARSENESS, NOT A PITCH. I'M DESCRIBING, IF I CAN DEMONSTRATE, A VOICE LIKE THAT THAT CRACKS (DEMONSTRATING), THAT CAN'T PROJECT.

IN FACT, PATIENTS SOMETIMES HAVE DIFFICULTY SWALLOWING. BUT WHEN WE SWALLOW, THE FIRST THING WE DO IS WE CLOSE OUR VOICE BOX OFF.

AND WITH THE PARALYZED NERVE, THEY HAVE NOT ONLY A HOARSENESS BUT SOMETIMES DIFFICULTY IN SWALLOWING. AND I COULDN'T SEE ANYTHING IN THE RECORD THAT THE PATIENT WAS

ACTUALLY CHOKING OR COULDN'T PROJECT HER VOICE OR HAD ANY HOARSENESS IN THAT SENSE.

Q. WHAT ELSE, IF ANYTHING, IS SIGNIFICANT ABOUT THIS X-RAY WITH RESPECT TO THE QUESTION OF WHERE THE TUMOR BEGAN?

A. ONCE AGAIN, IT HAS A SMOOTH MARGIN ON THIS TUMOR,

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AS WE KNOW FROM THE CAT SCAN, AND IT EXTENDS UP FRONT, BEHIND THE BREASTBONE. AND THAT'S NOT WHERE LYMPH NODES ARE THAT DRAIN THE LUNG.

Q. AND THEN, YOU HAVE ANOTHER DRAWING THAT PUTS THEM SIDE TO SIDE. THAT'S 2805.

A. IN FACT, WHAT I MIGHT SUGGEST IS THAT IF YOU WERE TO DRAW WHERE THE THYMUS WOULD BE LOCATED, IT WOULD BE LOCATED IN THIS REGION HERE (INDICATING).

Q. THAT'S WHAT THE YELLOW OVERLAY REPRESENTS THAT YOU JUST PUT UP THERE?

A. THE YELLOW OVERLAY REPRESENTS THE LOCATION OF A NORMAL THYMUS. IT IS NOT DRAWN FROM ANY ANATOMIC BOUNDARIES, BUT IT IS DRAWN FROM THE SITE WHERE THE THYMUS FREQUENTLY IS LOCATED. THE THYMUS HAS BEEN FOUND RESTING UP IN THE CHEST. IT HAS BEEN FOUND RESTING DOWN ON THE DIAPHRAGM. IT IN FACT HAS BEEN FOUND -- IN ONE CASE, A TUMOR ON THE THYMUS UNEQUIVOCALLY WAS FOUND WITHIN THE LEFT LUNG.

ALL OF THOSE ARE SOMEWHAT UNUSUAL. BUT THIS IS THE USUAL LOCATION OF THE THYMUS GLAND (INDICATING).

Q. WHAT DETERMINES WHERE YOU FIND IT? WHAT DETERMINES WHERE YOU FIND A NORMAL THYMUS IN A TYPICAL PERSON?

A. WELL, EVERYBODY IS BORN WITH A THYMUS GLAND. IT ARISES FROM ELEMENTS IN THE NECK AND DESCENDS BEHIND THE BREASTBONE IN EMBRYOLOGY, WHEN WE'RE BEING DEVELOPED IN THE UTERUS.

HOW FAR IT GOES -- AS YOU KNOW, THIS IS THE USUAL

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LOCATION. BUT WHY SOMETIMES IT GOES FURTHER DOWN AND OTHER TIMES RESTS OR IS FOUND UP IN THE NECK, I DON'T THINK ANYBODY KNOWS.

Q. WE ALSO HEARD TESTIMONY ABOUT WHAT'S CALLED "INVOLUTED THYMUS."

WHAT DOES THAT MEAN?

A. IN NORMAL PEOPLE, THE THYMUS, BY THE TIME WE'RE TEENAGERS, HAS DONE ITS JOB, WHICH IS EDUCATING LYMPHOCYTES TO KNOW HOW TO RECOGNIZE CELLS VERSUS SOMETHING ELSE. "SOMETHING ELSE" BEING, FOR INSTANCE, CERTAIN TYPES OF INFECTIONS OR AN ORGAN TRANSPLANT.

AND SO AS TIME GOES BY, THEY HAVE BEEN EDUCATED. THE THYMUS HAS ESSENTIALLY DONE ITS JOB, AND IT SIMPLY SHRIVELS UP.

AND SO USUALLY, YOU DON'T SEE A THYMUS ON A CHEST X-RAY OR A CAT SCAN. IF YOU CAN, IT'S PROBABLY ENLARGED AND ABNORMAL.

Q. IN MS. HENLEY'S CHEST X-RAY OR CT SCANS, CAN YOU OBSERVE A THYMUS OR A RESIDUAL THYMUS?

A. NO, I CAN'T. THERE ARE -- THERE ARE SOME TISSUES -- THERE ARE SOME IMAGES -- SOME OTHER IMAGES -- I'M SORRY -- THAT SUGGEST THAT THERE MAY BE SOME FAT IN THE MEDIASTINUM, WHICH IS USUALLY FOUND.

BUT NOTHING THAT YOU CAN SAY "YES, THERE IS RESIDUAL THYMUS. THEREFORE, THERE MUST BE SOME OBVIOUS ABNORMALITY IN THE THYMUS."

Q. WHAT IS THE RELATIONSHIP BETWEEN THE FINDING OF RESIDUAL THYMUS OR THE LACK THEREOF AND THE POSSIBILITY THAT

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A TUMOR, IN PARTICULAR, THIS TUMOR WAS ONE THAT MIGHT HAVE STARTED IN THE THYMUS?

A. PROBABLY NONE. IF YOU HAVE -- IF YOU CAN SEE ANY THYMUS, IT MAKES YOU WONDER WHETHER THERE'S SOME OTHER DISEASE PROCESS GOING ON.

BUT THE MASS IS FAIRLY WELL DEMARCATED. IT DOESN'T SEEM TO BE EXTENDING THROUGH THE REST OF THE THYMUS GLAND, AND THAT'S USUALLY THE CASE. SOMETIMES YOU CAN FIND TUMORS THAT HAVE GROWN FROM A THYMUS THAT LOOKS LIKE IT IS STARTING TO ACT UP AGAIN, AS IF IT'S BECOME REACTIVATED BY SOMETHING. I HAVE NO IDEA WHAT.

AND SO FINDING A THYMIC TUMOR ISN'T PARTICULARLY -- THINGS CALLED THYMOMAS IN THE PRESENCE OF HYPERPLASTIC THYMUS IS NOT UNCOMMON, BUT I DON'T SEE THAT PARTICULAR SCENARIO HERE.

Q. SO IF I UNDERSTAND WHAT YOU ARE SAYING, THE PRESENCE OF A THYMUS OR A PORTION OF THE THYMUS DOESN'T MAKE IT MORE OR LESS LIKELY THAT YOU CAN HAVE A TUMOR THAT STARTED IN SOME PART OF THE THYMUS?

A. STATISTICALLY, YES. IF IT'S ABSENT, IT DOESN'T MEAN IT'S LESS LIKELY. IF IT'S PRESENT, IT MEANS THAT IT IS MORE LIKELY.

Q. AND THEN, DESCRIBE FOR US WHAT YOU'VE DONE HERE ON 2805.

A. THIS EXHIBIT SHOWS WHERE THE LYMPH NODES ARE USUALLY LOCATED. THE GREEN LYMPH NODES ARE THE LYMPH NODES THAT ARE VISIBLE. THE BROWN ONES ARE THE ONES THAT ARE TUCKED BEHIND VESSELS. AND YOU CAN SEE THAT,

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CHARACTERISTICALLY, THEY ARE LOCATED AROUND THE WINDPIPE FROM THE FRONTAL VIEW, AND ON THE SIDE VIEW.

NOTE ALSO THAT THIS LYMPH NODE HERE ON THE NERVE (INDICATING) IS THE LYMPH NODE THAT I WAS COMMENTING ON BEFORE. AND THE MASS APPARENTLY HAS SPARED THAT REGION BECAUSE IT IS AN ANTERIOR MASS.

Q. AND AGAIN, WHAT SIGNIFICANCE DOES THAT HAVE IN TRYING TO DETERMINE WHETHER THIS WAS A TUMOR THAT STARTED IN THE LUNG?

A. WELL, IF THERE WERE ENLARGED LYMPH NODES, YOU MAY POSTULATE -- PARTICULARLY IF THE LYMPH NODES IN A PARTICULAR DRAINAGE PATTERN WERE ENLARGED, YOU MAY WANT TO WONDER WHETHER THERE'S SOMETHING GOING ON IN THE LUNG THAT WOULD DIRECT YOUR ATTENTION AT THE TIME OF BRONCHOSCOPY TO TAKE SAMPLES FROM THAT PART OF THE LUNG, OR TO LOOK MORE CAREFULLY AT THE X-RAY AT THAT PORTION OF THE LUNG.

Q. ALL RIGHT. DOCTOR, I THINK YOU CAN PROBABLY TAKE YOUR SEAT. AND IF YOU WANT TO REFER TO THIS FOR ANY OF THE OTHER QUESTIONS I ASK, I WILL PULL IT UP FOR YOU. MAYBE IT WOULD BE EASIER FOR YOU NOW TO TAKE YOUR SEAT.

A. THIS OVERLAY IN FACT IS WHERE YOU WOULD FIND THE THYMUS ON THE FRONTAL VIEW.

Q. THAT IS THE 2803, EXHIBIT 2803.

IS WHAT YOU ARE REFERRING TO NOW?

A. THAT'S CORRECT.

Q. DOCTOR, LET ME ASK YOU THIS QUESTION: YOU'VE REVIEWED THE MEDICAL RECORDS, INCLUDING THE PATHOLOGY REPORT IN THIS CASE; RIGHT?

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A. YES, I HAVE.
Q. AND THAT WAS THE REPORT OF THE DOCTOR WHO WAS ASKED TO LOOK AT THE BIOPSY THAT WAS TAKEN?
A. THAT'S CORRECT.
Q. AM I CORRECT THAT THE -- YOU TELL ME -- WHERE WAS THE TISSUE TAKEN THAT WAS SUBMITTED FOR THE BIOPSY?
A. THE OPERATIVE NOTE IS RATHER BRIEF. I CAN'T TELL YOU EXACTLY WHERE IT IS, BUT I CAN TELL YOU THE MOST LIKELY AREA THAT IT WAS TAKEN, AND THAT IS IN THE SAFEST AREA TO BIOPSY, THAT IS THE PART BEHIND THE BREASTBONE, UP FRONT (INDICATING), NOT DOWN AT THE ROOTS OF THE LUNG WHERE THE TUMOR HAS BEEN INVOLVING BLOOD VESSELS AND WHERE IT IS CLOSE TO NERVES.
Q. IS THERE ANY DOUBT IN YOUR MIND OR ANY QUESTION AS TO WHETHER THIS BIOPSY WAS TAKEN FROM INSIDE THE LUNG OR OUTSIDE THE LUNG?
A. OH, IT WAS TAKEN FROM OUTSIDE THE LUNG.
Q. AND THAT'S SOMETHING THAT YOU CAN DETERMINE FROM READING THE OPERATIVE REPORT?
A. NOT ONLY THAT, BUT IF THERE WERE A BIOPSY DONE INSIDE THE LUNG, THE LUNG, BEING A SPONGE-LIKE STRUCTURE, WOULD LEAK AIR. AND AT THE END OF THE OPERATION, IT WOULD CONTINUE TO LEAK AIR, AND YOU'D HAVE A COLLAPSED LUNG IN THE VAST MAJORITY OF CASES.
IN FACT, IT WOULD BE STANDARD PROCEDURE IF YOU TOOK A BIOPSY OF THE LUNG TO LEAVE A TUBE INSIDE FOR AT LEAST A COUPLE OF DAYS TO LET THE LUNG SEAL UP.
AND I KNOW, IN FACT, THAT IN THIS OPERATION, THAT

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ONE WASN'T LEFT IN. ONE WAS DONE TO EVACUATE AIR THAT MAY HAVE ENTERED THE CHEST AT THE TIME OF THE PROCEDURE, BUT THERE WAS NO CONTINUING AIR LEAK.
AND IN FACT, IN THE X-RAYS AFTER THE OPERATION, THERE WAS NO EVIDENCE OF AIR LEAKING FROM THE SURFACE OF THE LUNG. SO THIS WAS NOT A BIOPSY OF THE LUNG ITSELF.
Q. HAVE YOU PERFORMED PROCEDURES CALLED MEDIASTINOTOMIES AND MEDIASTINOSCOPIES?
A. OH, YES.
Q. THAT'S SOMETHING DIFFERENT THAN A BRONCHOSCOPY?
A. YES.
Q. THE BIOPSY IN THIS CASE WAS OBTAINED THROUGH A MEDIASTINOTOMY?
A. THAT'S CORRECT.
Q. YOU DON'T DISAGREE WITH THE PATHOLOGICAL DIAGNOSIS OF SMALL CELL CARCINOMA, DO YOU?
A. NO, NOT AT ALL.
Q. BASED ON YOUR REVIEW OF THE AVAILABLE RECORDS AND BASED ON YOUR REVIEW OF THE CT SCANS AND BASED ON YOUR REVIEW OF THE X-RAYS, DO YOU HAVE AN OPINION AS TO WHETHER IT'S MORE OR LESS LIKELY THAT THIS WAS A TUMOR THAT ACTUALLY STARTED IN A BRONCHUS OR IN AN AIRWAY OF THE LUNG?
A. I THINK THE FIRST REASONABLE IMPRESSION IS THAT THIS MAY BE LUNG. CERTAINLY LOOKING AT THE CHEST X-RAY AND HEARING THAT SOMEBODY HAS PRESENTED COUGHING UP SOME BLOOD, I THINK THAT HAS TO RUN ACROSS YOUR MIND.
BUT THE MORE I LOOKED AT THE CASE, WHERE NOTHING APPEARED ON THE CHEST X-RAY IN THE LUNG, NOTHING ON THE CAT

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SCAN THAT WAS WITHIN THE LUNG, A SPUTUM CYTOLOGY WAS NEGATIVE, DESPITE THE FACT THAT SHE IS COUGHING UP BLOOD,

AND A BRONCHOSCOPY WAS PERFORMED WHICH FAILED TO REVEAL ANY EVIDENCE OF TUMOR IN THE WINDPIPE, I THINK IT'S REASONABLE TO QUESTION WHETHER OR NOT THAT PRESUMPTION IS ACCURATE, ESPECIALLY SINCE WE KNOW THAT SMALL CELL CARCINOMA CAN ARISE ELSEWHERE.

AND IN THIS CASE, WITHIN THE THYMUS GLAND SEEMS TO BE MORE LIKELY, MUCH MORE LIKELY, THAN TO HAVE ARISED (SIC) IN -- THAT THE TUMOR TO HAVE ARISED WITHIN THE LUNG.

Q. YOU MENTIONED SOMETHING CALLED SPUTUM CYTOLOGY.

WHAT IS SPUTUM CYTOLOGY, AND HOW DOES IT BEAR ON THE ISSUE OF WHERE MS. HENLEY'S CANCER MIGHT HAVE STARTED?

A. WELL, SPUTUM CYTOLOGY IS THE ANALYSIS OF SPUTUM UNDER A MICROSCOPE, LOOKING AT INDIVIDUAL CELLS IN MUCUS THAT'S COUGHED UP BY ALL OF US, IN FACT.

AND IT IS MORE VALUABLE IN PATIENTS WHO HAVE CANCER CELLS THAT ARE BEING SHED INTO THE WINDPIPE OR INTO THE LINING OF THE WINDPIPE, WHICH YOU WOULD EXPECT WOULD BE THE CASE OF SOMEONE WHO IS COUGHING UP BLOOD THAT HAS SOMETHING GOING ON. IT IS MORE VALUABLE IN A CENTRAL TUMOR, WHICH SMALL CELL CARCINOMA TENDS TO BE.

BY THAT, I MEAN ONE NEAR THE ROOT OF THE LUNG (INDICATING), AS OPPOSED TO ONE WAY OUT ON THE SURFACE OF THE LUNG, WHERE YOU MAY EXPECT THEY WOULDN'T BE COUGHING UP BLOOD, AND THE SPUTUM CYTOLOGY WOULD BE NEGATIVE.

Q. A SMALL CELL CARCINOMA THAT YOU SUSPECT STARTED IN THE LUNG OR IN AN AIRWAY, IN A BRONCHUS, WOULD YOU EXPECT

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TO SEE A POSITIVE SPUTUM CYTOLOGY?

A. I WOULD EXPECT THAT IN 50 PERCENT OF CASES, YOU WOULD HAVE A POSITIVE CYTOLOGY.

IN THIS PARTICULAR SCENARIO, YES.

Q. AND IN THIS CASE, IT WAS NEGATIVE?

A. THAT'S CORRECT.

Q. DOCTOR, CAN YOU SAY WITH ANY -- WELL, LET'S PUT IT THIS WAY: CAN YOU SAY WITH ANY REASONABLE CERTAINTY WHERE THIS TUMOR BEGAN, IF IT DIDN'T BEGIN IN THE LUNG?

A. WELL, FOR THE REASONS THAT I PRESENTED, ITS LOCATION, ITS SMOOTH CONTOUR, ITS SPARING THE RECURRENT LARYNGEAL NERVE, DESPITE REACHING THE SIZE OF OVER 6 CENTIMETERS, NONE OF THE LYMPH NODES ARE ENLARGED, WHERE YOU WOULD EXPECT THEM TO BE ENLARGED -- AND THIS IS THE ONLY EVIDENCE OF THE TUMOR -- I THINK IT'S REASONABLE TO THINK OF SOMETHING ARISING WITHIN THE THYMUS GLAND.

Q. AND IF THIS WERE A TUMOR THAT STARTED SOMEWHERE OTHER THAN THE LUNG BUT WAS FOUND WHERE IT WAS FOUND IN THE CHEST, WITH THE CHARACTERISTICS AND SYMPTOMS YOU'VE DESCRIBED, IN YOUR EXPERIENCE, WOULD IT HAVE BEEN TREATED THE SAME WAY AS ONE THAT MIGHT HAVE STARTED IN THE LUNG?

A. OH, YES.

Q. WHY IS THAT?

A. WELL, SMALL CELL CARCINOMA IS A PARTICULARLY AGGRESSIVE TUMOR, AND RARELY DOES IT LEND ITSELF TO PRIMARY SURGICAL RESECTION.

Q. WHAT DO YOU MEAN BY "PRIMARY SURGICAL RESECTION"?

A. I MEAN THAT THE FIRST LINE OF THERAPY WOULD BE TO

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CUT IT OUT, TO TAKE IT OUT COMPLETELY, AS OPPOSED TO GIVING THE PATIENT CHEMOTHERAPY AND RADIATION THERAPY, AND SOMETIME SUBSEQUENTLY, OPERATING AND TAKING IT OUT, AFTER IT'S BEEN SHRUNK DOWN BY THE CHEMO AND RADIATION THERAPY.

MR. OHLEMEYER: YOUR HONOR, THOSE ARE ALL THE

QUESTIONS I HAVE.
THANK YOU, DOCTOR.
THE COURT: OKAY. MS. CHABER.
MS. CHABER: ARE WE GOING TO TAKE A BREAK?
THE COURT: DO YOU WANT TO TAKE A BREAK?
MS. CHABER: YES.
THE COURT: OKAY. JURORS, LET'S TAKE A 20-MINUTE RECESS UNTIL 25 MINUTES OF 4:00. PLEASE CONTINUE TO FOLLOW THE ADMONITION. WE'LL SEE YOU BACK AT 25 MINUTES TO 4:00.
(RECESS TAKEN FROM 3:15 TO 3:35 P.M.)
THE COURT: I THINK WE'RE READY TO PROCEED. MS. CHABER.
IS IT HELPFUL OR NOT TO HAVE THAT BOARD THERE? IF NOT, I'D JUST AS SOON MOVE IT.
MS. CHABER: I MAY USE SOME OF THIS.
THE COURT: IF YOU ARE GOING TO USE IT, KEEP THE STAND.
MS. CHABER: THE STAND IS NOT IN THE WAY, IS IT?
THE COURT: THAT'S FINE. OKAY.

CROSS-EXAMINATION
JUDITH ANN OSSA, CSR NO. 2310

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BY MS. CHABER: Q. DR. WARREN, WE'VE MET ONCE BEFORE?
A. YES, WE HAVE.
Q. WHEN I TOOK YOUR DEPOSITION?
A. YES, MA'AM.
Q. YOU PREPARED NO NOTES IN THIS CASE?
A. NO.
Q. NO REPORT?
A. NO.
Q. YOU DIDN'T REVIEW THE REPORTS OF ANY OTHER EXPERTS IN THIS CASE?
A. I REVIEWED A DEPOSITION OF DR. HAGEN.
Q. DID YOU REVIEW ANY REPORTS WHERE PEOPLE SET FORTH WHAT THEY HAD REVIEWED, WHAT THEIR FINDINGS WERE, WHAT THEIR CONCLUSIONS WERE, WHAT THE BASIS OF THOSE CONCLUSIONS WERE? DID YOU REVIEW ANYTHING LIKE THAT IN THIS CASE?
A. I REVIEWED THE HOSPITAL RECORDS AND THE OFFICIAL X-RAY REPORTS, AND WHAT I WAS PROVIDED BY MY ATTORNEYS.
Q. AND THEY DID NOT PROVIDE YOU, IF THERE ARE ANY, ANY REPORTS FROM DR. HORN OR A DR. FEINGOLD OR A DR. HAMMAR?
A. I BELIEVE I -- I CAN ONLY TELL YOU THAT I READ WHAT I WAS GIVEN, AND I DON'T REMEMBER ALL THE NAMES OF WHO SAID WHAT.
Q. AND YOU BROUGHT THE MATERIALS THAT YOU WERE GIVEN AND HAD REVIEWED TO YOUR DEPOSITION?
A. YES.
Q. AND AT YOUR DEPOSITION, IS IT FAIR TO SAY THAT IF YOU HAD READ THE REPORTS OF DR. HORN, DR. FEINGOLD AND DR.

JUDITH ANN OSSA, CSR NO. 2310

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HAMMAR, YOU WOULD HAVE TOLD ME THAT?
A. AS WE DISCUSSED AT THE DEPOSITION, I THINK I ITEMIZED EVERYTHING THAT I REVIEWED.
Q. AND DO I UNDERSTAND CORRECTLY THAT THE WAY YOU GOT INVOLVED IN THIS CASE WAS THAT DR. GOULD, WHO PRACTICES AT YOUR HOSPITAL AS WELL, BROUGHT YOU INTO IT?
A. I BELIEVE THAT THE GENTLEMAN FROM SHOOK, HARDY & BACON ORIGINALLY DISCUSSED THIS CASE WITH DR. GOULD, AND IT

WAS HIS SUGGESTION THAT THEY CONTACT ME, BUT IT WAS THEY WHO CONTACTED ME.

Q. AND DR. GOULD, YOU'RE AWARE, HAS TESTIFIED ON A NUMBER OF OCCASIONS FOR SHOOK, HARDY & BACON, AND THE CIGARETTE MANUFACTURERS THAT THEY REPRESENT?

A. I'M AWARE OF ONE OTHER SITUATION. IF THERE ARE MORE, I'M NOT CERTAIN ABOUT THAT.

Q. WELL, YOU'RE AWARE THAT DR. GOULD HAS REGULARLY CONSULTED WITH LAWYERS FROM SHOOK, HARDY & BACON ON CIGARETTE-RELATED MATTERS?

MR. OHLEMEYER: YOUR HONOR, IF I MAY OBJECT TO THIS QUESTION. THIS IS THE CROSS-EXAMINATION OF DR. WARREN, NOT DR. GOULD.

I THINK IT'S ARGUMENTATIVE, LACKS FOUNDATION.

THE COURT: LACKS FOUNDATION? IT'S NOT ARGUMENTATIVE, BUT IT MAY LACK FOUNDATION. THERE IS NO FOUNDATION IN THE RECORD FOR IT NOW.

MS. CHABER: Q. YOU AND DR. GOULD HAVE PUBLISHED SOME PAPERS TOGETHER?

A. YES, MA'AM.

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Q. YOU WORK TOGETHER?

A. YES, MA'AM.

Q. IT WAS DR. GOULD WHO SUGGESTED THAT YOU BE CONTACTED BY THE LAWYERS FROM SHOOK, HARDY & BACON?

A. THAT'S CORRECT.

Q. AND DR. GOULD IN THE PAST HAS TOLD YOU THAT HE HAS CONSULTED WITH THE LAWYERS FROM SHOOK, HARDY & BACON ON BEHALF OF CIGARETTE MANUFACTURERS?

A. YES, I AM AWARE OF THAT.

Q. AND IF I UNDERSTAND THE WAY YOUR REVIEW OF THE MATERIALS OCCURRED, SOME LAWYERS GOT ON AN AIRPLANE AND PHYSICALLY BROUGHT YOU X-RAYS TO REVIEW?

A. THAT'S CORRECT.

Q. AND THEY BROUGHT YOU THE MEDICAL RECORDS?

A. YES.

Q. AND YOU AND DR. GOULD AND THOSE LAWYERS ALL SAT DOWN IN A ROOM TOGETHER AND REVIEWED THE MATERIALS; CORRECT?

A. WELL, WHAT WE DID WAS MET ONE SATURDAY MORNING. IN FACT, DR. GOULD HAD MET WITH THESE GENTLEMEN ON A PREVIOUS OCCASION A WEEK OR TWO EARLIER -- I DON'T RECALL WHEN -- AND IT WAS AT THAT TIME THAT HE ASKED THEM TO SET UP THIS MEETING WITH ME.

WHEN WE SAT DOWN IN THE ROOM, THE FIRST THING THAT THEY DID WAS THEY GAVE ME THE X-RAYS TO READ. THEY GAVE ME A VERY LITTLE STORY. "THIS IS A 50-YEAR-OLD WOMAN AND PRESENTS WITH THESE X-RAYS. WHAT DO YOU THINK?"

AND SO I LOOKED AT THE X-RAYS WITHOUT A REPORT AND WITHOUT ANY BACKGROUND, WITHOUT HAVING SEEN ANY

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PATHOLOGY, WITHOUT HAVING REVIEWED ANY SLIDES, WITHOUT HAVING REVIEWED ANY RECORDS.

Q. AND IS IT TRUE THAT DR. GOULD WAS IN THE ROOM AT THE SAME TIME AS THE LAWYERS FOR SHOOK, HARDY & BACON WHILE YOU WERE REVIEWING THE X-RAYS?

A. YES.

Q. AND AT THAT POINT IN TIME, YOU TOLD THEM WHAT YOU THOUGHT?

A. I TOLD THEM A PRELIMINARY CONCLUSION.

Q. AND THAT HAS NEVER BEEN COMMITTED TO WRITING, HAS IT?

A. NOT IN MY BEHALF, NO.
Q. YOU DIDN'T PREPARE ANYTHING AS A RESULT OF EITHER THAT MEETING OR ANY OTHER SUBSEQUENT REVIEWS OF THE RECORDS?
A. NO.
Q. YOU DID NOT, WHEN YOU REVIEWED -- YOU HAVE REVIEWED THESE X-RAYS NOW ON HOW MANY OCCASIONS?
A. FOUR OR FIVE OCCASIONS.
Q. AND ON ANY OF THOSE FOUR OR FIVE OCCASIONS, DID YOU JOT DOWN WHAT YOUR IMPRESSIONS WERE ON THAT DAY?
A. NO, MA'AM.
Q. NOW, YOU HAVE HAD YOUR DEPOSITION TAKEN SOME 10 TO 12 TIMES IN THE PAST?
A. THAT'S CORRECT.
Q. AND YOU'VE TESTIFIED IN COURT TWO TIMES IN THE PAST?
A. THAT'S RIGHT.
Q. LET ME ASK YOU THIS, DOCTOR: OVER YOUR ENTIRE

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CAREER OF WHAT, 10 TO 15 YEARS, INCLUDING YOUR TRAINING?
A. 14 -- 14 YEARS OUT OF TRAINING.
Q. OKAY. AND THEN, HOW MUCH WITH TRAINING?
A. WELL, THREE YEARS OF CARDIOTHORACIC TRAINING, A YEAR OF RESEARCH, FOUR YEARS OF GENERAL SURGERY, AND A YEAR OF INTERNSHIP, ALL PART OF MY TRAINING IN MEDICINE.
Q. AND IN ALL OF THAT TIME PERIOD, IS IT TRUE, DOCTOR, THAT YOU HAVE SEEN A TOTAL OF 100 PRIMARY THYMIC TUMORS?
A. I THINK IT'S IN THAT RANGE, YES. THAT'S AN ESTIMATE.
Q. AND I BELIEVE WHEN YOU ESTIMATED THIS FOR ME IN YOUR DEPOSITION, YOU ESTIMATED THAT OF THOSE 100 THAT YOU'VE SEEN OVER THE LAST 20 YEARS, 25 OF THOSE WERE MALIGNANCIES?
A. YES. I JUST WANT TO CLARIFY THAT, IN CLINICAL PRACTICE, YOU KNOW, WE'RE REALLY TALKING ABOUT 14 YEARS. IF THINGS WERE HAPPENING IN MEDICAL SCHOOL, MY -- THAT 100 CASES IS OVER THE 14 YEARS THAT I'VE BEEN IN PRACTICE.
Q. DO YOU RECALL TELLING ME THAT THAT WOULD COVER THE TIME PERIOD OF YOUR CAREER AND INCLUDE YOUR TRAINING IN THORACIC SURGERY?
A. I DON'T REMEMBER THAT POINT. BUT IF IN MY TRAINING I'M STUDYING SOMETHING ELSE, I'M NOT GOING TO BE AWARE OF THYMOMAS COMING ALONG.
Q. SO IT'S FAIR TO SAY THEN, IN AN APPROXIMATELY 15-YEAR-TIME PERIOD, YOU SAW 100 PRIMARY THYMIC TUMORS, OF WHICH ONLY ONE-QUARTER OF THEM WERE MALIGNANT?
A. THAT'S RIGHT.

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Q. OKAY. SO THE OTHER THREE-QUARTERS -- THAT'S ABOUT THE LENGTH OF MY MATH SKILLS -- THE OTHER THREE-QUARTERS OF THOSE WERE BENIGN; THEY WERE NOT MALIGNANT? THEY WERE NOT CANCER?
A. THAT'S AN ESTIMATE, YES.
Q. SO OF THE 25 PRIMARY THYMIC CANCERS THAT YOU'VE SEEN OVER A 15-YEAR-TIME PERIOD, IS IT FAIR TO SAY, DR. WARREN, THAT NOT ONE SINGLE ONE OF THE CANCEROUS TUMORS THAT YOU FOUND TO BE PRIMARY TO THE THYMUS WERE OF THE SMALL CELL TYPE?
A. WELL, THAT IS WHAT I SAID AT MY DEPOSITION.
BUT THAT GOT ME TO REVIEW MY FILES. AND IN FACT, THERE ARE TWO INTERESTING CASES THAT PROBABLY WERE SMALL CELL CARCINOMA, ALTHOUGH AT THE TIME THEY WERE NOT -- THEY

WERE NOT PURE SMALL CELL CARCINOMAS, AND THEY WERE NOT CLEARLY SMALL CELL CARCINOMA OF THE THYMUS.

Q. NOW, DR. WARREN, YOU KNEW FROM HAVING BEEN INVOLVED IN LEGAL PROCEEDINGS BEFORE THAT YOU'RE SUPPOSED TO PREPARE AND HAVE ALL YOUR OPINIONS AND THE THINGS THAT YOU BASE THEM ON CONCLUDED AT THE TIME OF YOUR DEPOSITION?

A. I WASN'T AWARE OF THAT. BUT INASMUCH AS YOU ASKED A QUESTION THAT WAS OF INTEREST, I PAID ATTENTION TO MY RECORDS IN THE INTERVAL.

I MIGHT REMIND YOU THAT, AT THE TIME OF MY DEPOSITION, I WAS STILL LOOKING FOR A REFERENCE, AND THAT REFERENCE TURNS OUT TO BE A PAPER PUBLISHED BY DR. GOULD.

AND IN THAT REFERENCE, IT SO HAPPENS THAT THERE WAS A MALIGNANT CARCINOID/SMALL CELL CARCINOMA OF THE THYMUS

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THAT I, IN FACT, HAD PHOTOGRAPHED FOR HIM FOR THAT PUBLICATION.

SO CLEARLY, THAT COUNTS AS A CASE. BUT AT THE TIME OF MY DEPOSITION, I WASN'T FOCUSED ON THAT.

Q. AND YOU HAD AN OPPORTUNITY SINCE YOUR DEPOSITION TO MAKE A CORRECTION TO YOUR DEPOSITION AND TO CORRECT THE RECORD?

A. I BELIEVE THE LAWYERS AT SHOOK, HARDY & BACON WERE AWARE OF THAT, AND DID THE APPROPRIATE THINGS, YES.

Q. YOU ASSUME THEY DID THE APPROPRIATE THINGS?

A. I DID NOT CONTACT ANYBODY, BUT I CERTAINLY MADE THE LAWYERS AT SHOOK, HARDY & BACON AWARE THAT I HAD, UPON REVIEW, BECOME AWARE OF TWO ADDITIONAL CASES, TWO CASES.

Q. DID YOU WRITE ANY CHANGES OR CORRECTIONS TO YOUR DEPOSITION TESTIMONY?

A. NO. I MADE THEM AWARE, BUT I DID NOT MAKE ANY WRITTEN CHANGES.

Q. AND IN YOUR DEPOSITION TESTIMONY, YOU WERE VERY CLEAR AT THAT TIME, DOCTOR, THAT THERE WERE NONE OF THE SMALL CELL VARIETY THAT YOU HAD SEEN?

A. MY TESTIMONY AT DEPOSITION SAID THAT. HOWEVER, AS YOU'RE AWARE FROM THE REFERENCES THAT I PROVIDED YOU, SOME OF THE CASES OF SMALL CELL CARCINOMA IN THE LITERATURE WERE THE ADMIXED WITH MALIGNANT CARCINOID. SO THEY'RE NOT PURE SMALL CELL CARCINOMA.

ON A SMALL BIOPSY, CERTAINLY THEY WOULD LOOK LIKE A SMALL CELL CARCINOMA.

THE CASE I'M REFERRING TO, PUBLISHED BY DR. GOULD

0055

IN 1981, WAS RESECTED AS "MALIGNANT CARCINOID," AND SMALL CELL WAS FOUND WITHIN IT. I HAD NOT ORIGINALLY COUNTED THAT TO BE A SMALL CELL CARCINOMA.

WHEN I DISCOVERED THAT HE HAD PUBLISHED IT AS A SMALL CELL CARCINOMA ADMIXED WITH A CARCINOID, I THOUGHT THAT I WOULD HAVE TO CORRECT THAT STATEMENT IN THE DEPOSITION.

Q. AND YOU MADE A CHANGE, AND YOU SENT IT IN TO THE DEPOSITION REPORTER SO THAT THAT WOULD BE PUT INTO THE PERMANENT RECORD, AND SO THAT I WOULD HAVE THAT INFORMATION, SIR?

A. MY UNDERSTANDING, I HAD CONTACTED THE PEOPLE AT SHOOK, HARDY & BACON, AND I THOUGHT THAT THEY HAD MADE AN AMENDMENT TO THE DEPOSITION TO THAT EFFECT.

IT'S NOT THAT THERE IS A MISTAKE IN THE DEPOSITION. IT'S THAT, SINCE THE DEPOSITION, I HAD DISCOVERED TWO CASES THAT WERE OF INTEREST.

Q. AND IS IT FAIR TO SAY, THOUGH, THAT IN YOUR DEPOSITION, WHEN YOU WERE ASKED HOW MANY OF THE 25 MALIGNANT PRIMARY CARCINOMAS THAT YOU HAVE DIAGNOSED WERE SMALL; CELL, -- YOU GAVE AN UNEQUIVOCAL NONE --

A. WITH THE --

Q. -- AS YOUR ANSWER; IS THAT CORRECT?

A. THAT'S CORRECT. BUT I HAD NOT DIAGNOSED EITHER OF THESE CASES. SO IN FACT, THE RECORD STANDS CORRECTED. I DID NOT MAKE THOSE DIAGNOSES.

Q. AND IN FACT, YOU TESTIFIED IN YOUR DEPOSITION, DID YOU NOT, SIR, THAT THIS CASE, MS. HENLEY'S CASE, WOULD

0056

BE THE FIRST SMALL CELL THYMIC PRIMARY THAT YOU HAD SEEN IN YOUR CAREER; DO YOU RECALL TESTIFYING TO THAT?

A. YES, I DO.

Q. AND YOU DID SAY THAT?

A. YES, MA'AM.

Q. NOW, YOU'VE SEEN APPROXIMATELY, OR DIAGNOSED APPROXIMATELY 1,000 CASES OF LUNG CANCER DURING THIS SAME TIME PERIOD?

A. APPROXIMATELY.

Q. AND OF THOSE THOUSAND CASES OF LUNG CANCER, APPROXIMATELY 20 PERCENT OR 200 WERE OF THE SMALL CELL VARIETY?

A. THAT IS HOW MANY SMALL CELL CARCINOMAS WOULD BE FOUND IN A GENERAL POPULATION OF 1,000. SO THAT'S A GUESS, YES.

Q. WAS THAT A GUESS YOU WERE GIVING, DOCTOR?

A. I DID NOT REVIEW MY RECORDS AND COUNT UP THE NUMBER OF DIAGNOSES OF SMALL CELL THAT I HAD MADE.

Q. AND, DOCTOR, HOW MANY OF THOSE 200 PEOPLE WITH SMALL CELL LUNG CANCER SMOKED?

A. I DON'T RECALL.

Q. DO YOU RECALL TESTIFYING IN YOUR DEPOSITION, WHEN I ASKED YOU THE SAME QUESTION, THE QUESTION BEING: "AND HOW MANY OF THOSE 200 PEOPLE WITH SMALL CELL LUNG CANCER SMOKED," YOUR ANSWER WAS, "ALL OF THEM"? DO YOU RECALL THAT, DOCTOR?

A. I DON'T RECALL IT. I CAN BELIEVE THAT IT'S TRUE, EXCEPT THAT I HAD ONE PATIENT -- I THINK IF YOU READ ON, YOU

0057

WILL FIND THAT IT DEPENDS WHAT WE DEFINE AS A SMOKER, A NONSMOKER AND AN EX-SMOKER.

AND I WENT ON TO DEFINE THAT AN EX-SMOKER WAS SOMEBODY WHO HAD QUIT SMOKING FOR 15 YEARS, AND THAT THE VAST MAJORITY OF PEOPLE WHO HAD SMALL CELL CARCINOMA ARE SMOKERS, WERE SMOKERS, BUT THAT I HAD FOUND ONE PATIENT WHO HAPPENED TO HAVE QUIT SMOKING MORE THAN 15 YEARS BEFORE THEIR SMALL CELL CARCINOMA WAS DIAGNOSED. SO THERE WAS ONE PATIENT THAT I'M AWARE OF.

Q. AND, DOCTOR, IS IT TRUE THEN THAT ALL BUT ONE OF THE PEOPLE OF THE 200 PEOPLE YOU'VE DIAGNOSED WITH SMALL CELL LUNG CANCER WERE SMOKERS?

A. YES.

Q. AND THE ONE WHO WAS DIAGNOSED HAD BEEN A FORMER SMOKER; CORRECT?

A. THAT'S CORRECT.

Q. NOW, DOCTOR, IN A WOMAN WHO PRESENTS WITH A LEFT HILAR MASS AND A 75 TO 122-PACK-YEAR SMOKING HISTORY, WOULD YOU AGREE THAT THE MOST LIKELY DIAGNOSIS OF THAT PERSON IS GOING TO BE LUNG CANCER?

A. YES.
Q. AND YOU WOULD AGREE, WOULD YOU NOT, THAT LUNG TUMORS GROW IN TWO WAYS?
A. AT LEAST TWO WAYS.
Q. ONE OF THE WAYS IS THAT THEY GROW BY ESTABLISHING METASTATIC DISEASE?
A. YES.
Q. AND THAT'S WHAT YOU WERE TALKING ABOUT, ABOUT

0058

METASTASIZING INTO THE LYMPH NODES; CORRECT?
A. CORRECT.
Q. AND IT'S TRUE, DOCTOR, ISN'T IT, THAT LUNG CANCERS ALSO GROW BY DIRECT SPREAD?
A. YES.
Q. AND I THINK THAT YOU INDICATED THAT THE MASS WAS NEXT TO THE BRONCHIAL TUBE?
A. IT'S A GREATER THAN SIX-CENTIMETER MASS, AND AT ONE PLACE IT IS TOUCHING AGAINST THE BRONCHUS, YES.
Q. AND IN FACT, IT'S SURROUNDING THE BRONCHUS, ISN'T IT?
A. I DON'T BELIEVE SO. IT'S SURROUNDING THE ARTERY, BUT NOT THE BRONCHUS.
Q. DID YOU SEE REFERENCE IN THE MEDICAL RECORDS TO IT SURROUNDING THE BRONCHUS?
A. I DON'T RECALL.
Q. CAN YOU SEE IT, DOCTOR, WHERE THERE'S TUMOR ON EITHER SIDE OF THE BRONCHUS SURROUNDING IT ON THE CAT SCANS?
A. I THINK THAT IT IS AGAINST THE BRONCHUS, BUT I DON'T THINK IT SURROUNDS THE BRONCHUS.
Q. AND, DOCTOR, YOU WOULD AGREE THAT THERE CAN BE A SUBMUCOSAL LESION IN THE BRONCHUS?
A. YES.
Q. AND "SUBMUCOSAL" MEANS WHAT, DOCTOR?
A. UNDER THE MUCOSA, UNDER THE LINING.
Q. AND THIS IS UNDER THE LINING, BUT WOULD NOT APPEAR IF YOU WERE LOOKING FROM THE INSIDE OF THE BRONCHIAL TUBE?

0059

A. WELL, IF THERE IS SUBMUCOSAL SPREAD OF TUMOR, YOU CAN SEE IT. BUT THE MUCOSA IS THICK. IT'S LINED UP WITH -- THE FACT THAT THE LINING IS ITSELF INTACT IS WHAT'S IMPLIED HERE.
BUT THAT THE TUMOR IS BETWEEN THE RINGS OF CARTILAGE STARTING IN THE WINDPIPE AND THE LINING.
SO YES, YOU CAN SEE A SUBMUCOSAL TUMOR.
Q. DOCTOR, IT CAN PRESENT AS INFLAMMATION, CAN'T IT?
A. TYPICALLY, YOU MAKE A DISTINCTION BETWEEN SUBMUCOSAL TUMOR AND INFLAMMATION.
Q. NOW, DOCTOR, I THINK YOU INDICATED THAT THERE ARE SOME SYMPTOMS THAT YOU'D EXPECT IN SOMEBODY WHO PRESENTED WITH A LUNG CANCER?
A. YES.
Q. AND WERE YOU GIVING THESE SYMPTOMS SPECIFICALLY ABOUT A SMALL CELL CANCER?
A. NO, MA'AM.
Q. YOU WERE GIVING THESE SYMPTOMS WHEN IT RELATED TO THE NERVE AND IMPINGING ON THE NERVE, THE VOCAL CORD NERVE?
DO YOU KNOW WHAT I'M TALKING ABOUT WHEN I'M SAYING THAT?
A. I SAID THAT ONE OF THE WAYS THAT THE CANCER CAN PRESENT IS BY INVOLVING THE NODE RIGHT ON THAT NERVE, THAT

IT CAN CAUSE A PATIENT TO BE HOARSE, AND THAT THAT CAN BE PRESENTING SYMPTOMS.
BUT THAT'S NOT SPECIFIC TO A SMALL CELL CARCINOMA OF THE LUNG.
Q. AND IT'S ALSO NOT SOMETHING THAT OCCURS IN EVERY

0060

PERSON WHO PRESENTS WITH A SMALL CELL CARCINOMA OF THE LUNG?
A. NOT EVERY PATIENT, NO.
Q. AND IN FACT, MS. HENLEY DID EXPLAIN THAT SHE COULDN'T SING, SHE COULDN'T PROJECT HER VOICE.
DO YOU RECALL THAT?
A. I RECALL THAT THERE WERE -- THERE WAS A COMMENT IN THE RECORD THAT HER VOICE WAS NORMAL. I REMEMBER THAT SPECIFICALLY WRITTEN OUT, THAT HER VOICE WAS NORMAL.
I REMEMBER THAT ONE OF THE REASONS THAT SHE WAS CONCERNED ABOUT SMOKING WAS THAT SHE MIGHT DEVELOP A LOW VOICE, BUT I DON'T REMEMBER ANYTHING IN THE RECORD ABOUT HER HAVING HOARSENESS.
Q. YOU DON'T REMEMBER ANYTHING IN THE RECORD ABOUT HER SAYING THAT SHE COULDN'T SING AS MANY SONGS; SHE COULDN'T SING AS WELL?
A. I DON'T RECALL THAT, BUT THAT'S NOT WHAT I'M TALKING ABOUT WITH HOARSENESS. THE ABILITY TO SING IS SOMETHING ELSE.
Q. AND, DOCTOR, MR. OHLEMEYER KEPT ASKING YOU ABOUT A TYPICAL CANCER OF THE LUNG.
CANCERS PRESENT DIFFERENTLY IN INDIVIDUALS, DON'T THEY?
A. YES.
Q. AND SOMETIMES, THERE'S SOMETHING THAT'S A COMPLETELY CLASSIC PRESENTATION?
A. YES.
Q. AND SOMETIMES, THERE ARE THINGS THAT ARE LESS CLASSIC PRESENTATIONS?

0061

A. YES.
Q. AND DOCTOR, IT'S TRUE, IS IT NOT, THAT EVEN THE LEAST TYPICAL SMALL CELL LUNG CANCER, THE LEAST TYPICAL PRESENTATION OF A SMALL CELL LUNG CANCER IS MORE COMMON THAN A THYMIC CANCER?
A. I THINK THAT'S SORT OF A GENERAL STATEMENT. I'M NOT SURE I CAN SAY YES OR NO TO THE WAY YOU PHRASED IT.
Q. WELL, DOCTOR, YOU INDICATED IN YOUR DEPOSITION, DID YOU NOT, THAT THERE ARE CANCERS THAT PRESENT AND THAT DON'T PRESENT IN THE CLASSIC PATTERN, WRITTEN UP IN TEXTBOOKS AND WITH WHAT YOU'VE DESCRIBED?
A. OF COURSE.
Q. AND YOU INDICATED THAT SOMEWHERE BETWEEN 5 AND 10 PERCENT OF LUNG CANCERS MIGHT PRESENT ATYPICALLY?
A. GENERALLY SPEAKING, YES.
Q. NOW, YOU WOULD AGREE, WOULD YOU NOT, THAT THYMIC CANCER IS A VERY UNUSUAL CANCER?
A. IT'S CERTAINLY MUCH LESS COMMON THAN LUNG CANCER, GENERALLY SPEAKING, YES.
Q. DOCTOR, IN TERMS OF A SITE FOR A SMALL CELL CANCER, WOULD YOU AGREE THAT THE THYMUS IS AT THE VERY BOTTOM OF THE LIST OF COMMON SITES FOR THE PRESENTATION OF A PRIMARY SMALL CELL CANCER?
A. I WOULDN'T SAY THAT, NO.
Q. DOCTOR, HAVE YOU EVER LOOKED AT THE SEER DATA?
A. NO.

Q. DO YOU KNOW THAT OR DO YOU HAVE INFORMATION THAT THE AMERICAN CANCER SOCIETY KEEPS RECORDS OF THE LOCATIONS

0062

OF CANCER THAT PRESENT AS INCIDENCES OF CANCER IN A GIVEN YEAR?

A. YES.

Q. AND THEY KEEP RECORDS OF THE INFORMATION OF THE PEOPLE WHO DIE OF CANCER AND WHAT THE SITE OF ORIGIN IS?

A. YES.

Q. AND DO YOU KNOW, DOCTOR, THAT THERE ARE 46 DIFFERENT SITES LISTED ON THE SEER DATA?

A. I'M NOT AWARE OF THAT.

Q. DO YOU KNOW, DOCTOR, WHERE LUNG CANCER IS IN TERMS OF SITES OF CANCER PRESENTATION?

A. I WOULD EXPECT IT TO BE ON THE TOP OF THE LIST.

Q. AND DO YOU KNOW, DOCTOR, WHERE THYMIC CANCER IS?

A. I WOULD EXPECT IT TO BE NOT ON -- IN THE TOP HALF.

Q. WOULD IT SURPRISE YOU, DOCTOR, IF IT WAS IN THE VERY BOTTOM OF THE LIST?

A. I THINK IT WOULD BE MISLEADING.

Q. DOCTOR, IN TERMS OF THE SITES OF CANCER, WOULD YOU AGREE THAT LESS THAN 1 PERCENT OF CANCERS PRESENT IN THE THYMUS?

A. THAT'S PROBABLY TRUE, GENERALLY SPEAKING.

Q. WOULD YOU AGREE THAT LESS THAN .1 PERCENT OF CANCERS PRESENT IN THE THYMUS?

A. I'M NOT FAMILIAR WITH THE STATISTICS TO BE ABLE TO SAY WHETHER IT'S .1 OR 1 PERCENT. IT'S AN UNCOMMON SITE FOR A CANCER.

Q. AND, DOCTOR, I THOUGHT I HEARD ON DIRECT

0063

EXAMINATION THAT YOU SAID THAT THE HILUM WAS THE ROOT OF THE LUNG?

A. I DON'T BELIEVE I SAID THAT, BUT IT IS TRUE.

Q. AND, DOCTOR, IS IT TRUE THAT THE BRONCHUS, THE AIR TUBES, ARE A PART OF THE LUNG?

A. NO, THE BRONCHUS IS NOT PART OF THE LUNG.

Q. THE BRONCHUS IS NOT PART OF THE LUNG?

A. TYPICALLY SPEAKING, THE BRONCHUS, THE MAIN STEM BRONCHUS, THE AIRWAY, IS NOT PART OF THE LUNG, NO.

Q. SO IN OTHER WORDS, WHEN A CANCER OCCURS IN THE AIRWAY, IT'S NOT A LUNG CANCER?

A. WELL, YOU SAY "BRONCHUS." I'M TAKING YOUR QUESTIONS VERY LITERALLY HERE.

Q. WELL, DO CANCERS OCCUR IN THE BRONCHUS?

A. YES, MA'AM, THEY DO.

Q. DO CANCERS OCCUR IN THE AIRWAYS?

A. CANCERS OCCUR IN THE TRACHEA AND IN THE WINDPIPE. THEY'RE NOT LUNG CANCERS NECESSARILY.

Q. ARE CANCERS THAT OCCUR IN THE MAIN STEM BRONCHUS CONSIDERED LUNG CANCERS, DOCTOR?

A. IF THEY ARE LIMITED TO THE MAIN STEM BRONCHUS, THEY ARE NOT CONSIDERED TO BE LUNG CANCER.

Q. DOCTOR, YOU'RE FAMILIAR WITH ARTICLES, AND I THINK ONE YOU MAY HAVE PRODUCED ON "THYMIC CARCINOMA: SPECTRUM OF DIFFERENTIATION AND HISTOLOGIC TYPES" BY SUSTER AND MORAN?

A. YES, MA'AM.

Q. DOCTOR, WHEN THEY SPEAK OF DIFFERENTIAL DIAGNOSES

0064
THERE, THEY WERE TALKING ABOUT THE DIFFERENT CELL TYPES?
A. THERE WERE REFERENCES IN THERE TO CLINICAL PRESENTATION OF THE VARIOUS CELL TYPES, YES.
Q. AND THEY WERE TALKING SOMEWHAT ABOUT THE DIFFERENTIAL DIAGNOSIS, WHERE YOU MAKE STATEMENTS ABOUT WHAT ARE PROBABLE THINGS THAT YOU'RE LOOKING AT THAT, WHAT YOU'RE GOING TO CONSIDER IN DETERMINING WHAT A PATIENT'S DIAGNOSIS IS; CORRECT?
A. YES.
Q. AND IN TERMS OF THE DIFFERENTIAL DIAGNOSIS IN MS. HENLEY'S CASE, DID YOU SEE ANYWHERE IN HER TREATING RECORDS WHERE A SINGLE ONE OF HER DOCTORS INCLUDED A THYMIC CANCER AS PART OF THE DIFFERENTIAL?
A. NO.
Q. AND, DOCTOR, IT'S TRUE, IS IT NOT, THAT A DIAGNOSIS OF THYMIC CANCER MUST BE BASED ON THE EXCLUSION OF A PRIMARY TUMOR ELSEWHERE?
A. I BELIEVE, IF YOU ARE QUOTING THE ARTICLE, YOU'RE TALKING ABOUT SMALL CELL CARCINOMA OF THE THYMUS; IS THAT CORRECT?
Q. OKAY. I'LL LIMIT IT TO THAT. LET ME REPHRASE MY QUESTION THEN.
IS IT TRUE, DOCTOR, THAT THE RENDERING OF A DIAGNOSIS OF PRIMARY SMALL CELL CARCINOMA OF THE THYMUS MUST BE BASED ON THE EXCLUSION OF A PRIMARY TUMOR ELSEWHERE?
A. THAT'S ACCURATE. AND THAT'S WHY I QUESTIONED HOW THE CANCER SOCIETY CAN BE SURE THAT SOME OF THE SMALL CELL CARCINOMAS OF THE MEDIASTINUM DIDN'T ARISE IN THE THYMUS,

0065
SINCE OFTEN THE TUMOR IS WIDESPREAD AND YOU CAN'T -- YOU SIMPLY CAN'T TELL.
AND BASED ON THAT RATHER HIGH STANDARD, IT MAY WELL BE THAT SOME OF THE THYMIC SMALL CELL CARCINOMAS HAVE SPREAD THROUGHOUT THE MEDIASTINUM AND WERE ASSUMED TO BE LUNG AND, IN FACT, WERE THYMIC IN ORIGIN.
AND THAT IS WHY IT MAY WELL BE A MORE COMMON DIAGNOSIS THAN HAS BEEN REFLECTED IN THE STATISTICS.
Q. I THINK, IN YOUR DEPOSITION, YOU SAID YOU THOUGHT THERE WERE ABOUT 200,000 LUNG CANCERS A YEAR?
A. YES.
Q. AND I THINK THAT YOU INDICATED THAT APPROXIMATELY 20 PERCENT OF THOSE 200,000 WOULD BE OF THE SMALL CELL VARIETY?
A. THAT'S CORRECT.
Q. AND, DOCTOR, I WANT YOU TO ASSUME THAT -- I DON'T KNOW -- WHAT DO YOU THINK IS A REASONABLE NUMBER?
LET ME ASK YOU: WHAT IS A REASONABLE NUMBER OF MISDIAGNOSES, DOCTOR, OF ALL OF THOSE 200,000 LUNG CANCERS, WHERE THE DIAGNOSIS SHOULD HAVE BEEN THYMIC CANCER?
A. I HAVE ABSOLUTELY NO IDEA.
Q. DOCTOR, I WANT YOU TO ASSUME THAT THE REPORTED INCIDENCE OF THYMIC CANCERS -- STRIKE THAT -- THE REPORTED INCIDENCE OF OTHER NEUROENDOCRINE CANCERS, OF WHICH THYMIC CANCER WOULD BE INCLUDED, IS LESS THAN 800 IN A YEAR.
CAN YOU MAKE THAT ASSUMPTION?
A. I'LL MAKE THAT ASSUMPTION.
Q. HOW MANY DIAGNOSES OF THOSE 800 NEUROENDOCRINE

0066
CANCERS -- FIRST OF ALL, CAN YOU EVEN ESTIMATE HOW MANY OF THOSE 800 WOULD BE A THYMIC CANCER?

A. I'M SORRY. I'M NOT FOLLOWING YOUR QUESTION.
THYMIC CANCERS CAN BE OF MANY VARIETIES. SOME ARE SMALL CELL. MANY ARE NOT. SO --
Q. I'M NOT EVEN TALKING ABOUT SMALL CELL, DOCTOR.
I WANT YOU TO ASSUME THE INCIDENCE ON A YEARLY BASIS OF OTHER NEUROENDOCRINE CANCERS, ELIMINATING -- NOT INCLUDING THE LUNG, NOT INCLUDING OTHER SITES, ONLY CANCERS THAT WOULD BE IN THE AREA WHERE THE THYMUS AND OTHER NEUROENDOCRINE SYSTEMS ARE.
A. I'M SORRY. NEUROENDOCRINE IS THE DIFFERENTIAL -- IS THE PATTERN OF DIFFERENTIATION FOUND IN SMALL CELL CARCINOMA.
SO I SIMPLY DON'T UNDERSTAND YOUR QUESTION. SMALL CELL CARCINOMAS ARE ALMOST BY DEFINITION NEUROENDOCRINE.
Q. I MISSPOKE, DOCTOR. OTHER ENDOCRINE SITES.
A. ENDOCRINE?
Q. ENDOCRINE.
A. OKAY.
Q. WOULD THE THYMUS BE IN THERE?
A. CHARACTERISTICALLY, THE THYMUS IS NOT CONSIDERED TO BE AN ENDOCRINE ORGAN. YOU WILL HAVE TO GO ON --
Q. LET ME FIND THE EXACT DOCUMENT, DOCTOR, BECAUSE I WANT TO SEE THEN WHAT CATEGORY YOU WOULD PUT IT IN.
SOMEHOW, IT'S NOT IN THERE. I DON'T SEE IT.
SO AS TO NOT WASTE YOUR TIME, DOCTOR, AND THE

0067

JURY'S TIME, I WANT YOU TO ASSUME A TOTAL OF 800 OTHER -- I WANT YOU TO ASSUME THE FOLLOWING: THAT THE SEER DATA IS LISTED BY SITE OF ORIGIN OF CANCER.
A. OKAY.
Q. AND I WANT YOU TO ASSUME FURTHER THAT IT IS NOT BROKEN DOWN INTO CELL TYPE.
CAN YOU ASSUME THAT?
A. I'LL ASSUME ANYTHING YOU WANT.
Q. ASSUME FURTHER THAT THE NO. 1 SITE FOR CANCER IS THE LUNG.
A. YES.
Q. AND I WANT YOU TO ASSUME FURTHER THAT THE NUMBER 46 ON A LIST OF 46 SITES OF OTHER SITES NOT PREVIOUSLY IDENTIFIED INCLUDES THYMIC CANCER.
A. ALL RIGHT.
Q. AND I WANT YOU TO ASSUME, OF THESE OTHER SITES, THERE'S A TOTAL OF 800 CASES IN A YEAR.
A. ALL RIGHT.
Q. DO YOU HAVE ANY WAY TO ESTIMATE HOW MANY THYMIC CANCERS THERE ARE IN A YEAR?
A. WE'RE GOING BACK TO THYMIC CANCER AND NOT NEUROENDOCRINE?
Q. THYMIC CANCER.
A. THYMIC CANCER.
HOW MANY THYMIC CANCERS?
Q. HOW MANY THYMIC CANCERS IN A YEAR IN THE UNITED STATES?
A. THE TERMINOLOGY OF THYMIC TUMORS HAS UNDERGONE

0068

EVOLUTION. IN THE ARTICLE THAT YOU REFERRED TO, THERE IS A -- IT HAS PRACTICALLY A PAGE OF THE CONTROVERSY OF THE TERMINOLOGY REGARDING THYMIC TUMORS, MALIGNANT THYMOMAS TYPE 1, MALIGNANT THYMOMAS TYPE 2.

IT LISTED SIX OR SEVEN DIFFERENT TYPES OF MALIGNANT THYMIC CARCINOMAS AS SEPARATE FROM THE MALIGNANT THYMOMA WHICH, STRICTLY SPEAKING, IS A MALIGNANT THYMIC TUMOR.

Q. HOW MANY OF ALL OF THOSE -- THROW THEM ALL IN -- HOW MANY IN A GIVEN YEAR, DOCTOR, IN THE UNITED STATES?

A. I DON'T KNOW. I SIMPLY DON'T KNOW.

Q. LESS THAN 1,000?

A. THERE MAY WELL BE.

Q. LESS THAN 500?

A. I DON'T KNOW, COUNSELOR. I WOULD EXPECT THAT IT WOULD BE MORE THAN 500.

Q. DOCTOR, DO YOU KNOW HOW MANY SMALL CELL THYMIC PRIMARY CANCERS HAVE BEEN REPORTED IN ALL THE WORLD'S LITERATURE, IN ALL THE TIME THAT IT HAS BEEN BEING REPORTED?

A. I WOULD SAY PROBABLY IN THE ORDER OF 10 TO 15 CASES.

BUT I SAY, AGAIN, IT'S BEEN MASSIVELY UNDERREPORTED BECAUSE OF THE EXTENSIVE INVOLVEMENT OF THE MEDIASTINUM BY A LUNG PRIMARY, WHICH CLEARLY IS MORE COMMON, AND SECONDLY INVOLVES THE MEDIASTINUM, AND OFTEN IN A WIDESPREAD FASHION.

SO FOR IT TO BE PUBLISHED, IT HAS TO BE CLEAR, IT HAS TO BE UNEQUIVOCAL. YOU NEED A LOT OF INFORMATION OR

0069

IT'S SIMPLY GOING TO BE OVERLOOKED AS TO THE SITE OF ORIGIN.

Q. YOU SAID 10 OR 15; CORRECT?

A. THAT'S WHAT I SAID.

Q. AND YOU SAID "MASSIVELY UNDERREPORTED"?

A. IT MIGHT BE MASSIVELY UNDERREPORTED.

Q. TELL US HOW MANY MASSES HAVE BEEN UNDERREPORTED. HOW MUCH SHOULD THAT NUMBER BE?

A. I DON'T -- I HONESTLY DON'T KNOW. YOU WILL HAVE TO TURN BACK THE CLOCK AND KNOW WHERE THOSE TUMORS AROSE TO BE CERTAIN.

Q. AND SO MS. HENLEY'S CASE THEN, IF IT'S ONE OF 10 OR 15 OR 20, I MEAN, THAT'S REPORTABLE, ISN'T IT, DOCTOR?

MR. OHLEMEYER: I OBJECT. IT'S ARGUMENTATIVE AS FRAMED, YOUR HONOR.

THE COURT: THAT QUESTION IS. I'LL SUSTAIN.

MS. CHABER: Q. IF MS. HENLEY HAS A THYMIC CANCER, DOCTOR, THAT'S SOMETHING THAT WOULD BE HIGHLY SIGNIFICANT TO REPORT IN THE MEDICAL LITERATURE, WOULDN'T IT?

A. NO, I DON'T THINK SO.

Q. WOULDN'T IT BE IMPORTANT, DOCTOR, TO REPORT ALL OF THESE CASES OF THYMIC CANCER SO THAT THE AMERICAN CANCER SOCIETY AND THE PEOPLE WHO KEEP STATISTICS ON INCIDENCES OF CANCER AND WHERE THEY ARE, THEIR SITES ARE, CAN GET IT RIGHT?

A. I THINK PROBABLY NOT, FOR AT LEAST TWO REASONS.

FIRST OF ALL, THE THERAPY IS EXACTLY THE SAME. SO IT REALLY DOESN'T MATTER IN THE MANAGEMENT.

0070

AND SECONDLY, I CAN'T PROVE THAT THIS TUMOR ARISES IN THE THYMUS GLAND. I CAN ONLY SAY THAT I HAPPEN TO THINK IT'S THE MOST LIKELY SITE, BUT I CAN'T PROVE TO A MEDICAL CERTAINTY THAT IT ARISES WITHIN THE THYMUS GLAND.

Q. SO IF I UNDERSTAND THAT CORRECTLY, YOU CANNOT SAY WITH A REASONABLE DEGREE OF MEDICAL CERTAINTY THAT MS. HENLEY HAS A THYMIC CANCER; IS THAT CORRECT?

A. I CAN'T SAY WITH MEDICAL CERTAINTY THAT THIS SMALL CELL CARCINOMA IS IN THE THYMUS; THAT IS CORRECT.
Q. AND, DOCTOR, LET ME ASK YOU THE FOLLOWING QUESTION: DO YOU BELIEVE THAT CIGARETTE SMOKING CAUSES LUNG CANCER?
A. I BELIEVE CIGARETTE SMOKING IS A PRIMARY RISK FACTOR FOR THE DEVELOPMENT OF LUNG CANCER.
Q. DOCTOR, DO YOU BELIEVE CIGARETTE SMOKING CAUSES LUNG CANCER?
A. I'M NOT COMFORTABLE WITH THE TERM "CAUSE," WHICH WE HAVE MANY FACTORS THAT HAVE BEEN IMPLICATED IN THE DEVELOPMENT OF A CHRONIC CONDITION AND IN WHICH THERE IS A BACKGROUND INCIDENCE WITHOUT ANY RISK FACTORS.
SO I BELIEVE MOST PEOPLE, MOST DOCTORS, NOW TALK IN TERMS OF RISK FACTOR FOR HEART DISEASE, FOR DEVELOPMENT OF CANCERS, AND I AGREE -- I ABSOLUTELY BELIEVE THAT CIGARETTE SMOKING IS AN IMPORTANT RISK FACTOR IN THE DEVELOPMENT OF LUNG CANCER.
Q. NOW, DOCTOR, YOU OPERATE ON PEOPLE AND YOU TELL FAMILY AND PEOPLE AND PATIENTS THAT THEY HAVE LUNG CANCER; CORRECT?

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A. THAT'S RIGHT.
Q. AND, DOCTOR, I GUESS THEN IF THEY ASK YOU, "WELL, DOCTOR, I SMOKED ALL MY LIFE. DID THAT CAUSE MY CANCER," YOU WOULDN'T BE ABLE TO TELL THEM THAT IT DID?
A. I'D SAY, "POSSIBLY SO. PROBABLY SO. BUT I CAN'T SAY FOR CERTAIN."
Q. DO YOU BELIEVE THAT CIGARETTE SMOKING IS A PROBABLE CAUSE OF LUNG CANCER?
A. IT'S A PRIMARY RISK FACTOR. IT'S HIGHLY ASSOCIATED. IT'S AN IMPORTANT RISK FACTOR, AND PEOPLE SHOULDN'T SMOKE.
Q. DOCTOR, DO YOU ACCEPT THE SURGEON GENERAL'S DEFINITION OF THE WORD "CAUSE"?
A. I'M NOT AWARE OF THE SURGEON GENERAL GIVING A DEFINITION OF THE WORD "CAUSE."
Q. HAVE YOU READ ANY OF THE SURGEON GENERAL'S REPORTS ON THE HEALTH CONSEQUENCES OF SMOKING?
A. ACTUALLY, I HAVEN'T, NO.
Q. NONE OF THEM?
A. NO, MA'AM. ONLY WHAT'S BEEN REPORTED IN THE PRESS.
Q. SO YOU HAVEN'T GONE TO ANY OF THE SOURCES, BE IT THE 1964 REPORT, THE '68 REPORT, THE '79 REPORT, THE '88 REPORT, WHATEVER REPORT? YOU HAVEN'T GONE AND READ A SINGLE ONE OF THEM?
A. MA'AM, I'M A SURGEON. I HAVEN'T READ THE SURGEON GENERAL'S STATEMENTS, AND I'VE NEVER READ ANY, INCLUDING WHAT YOU HAVE IN FRONT OF YOU. I'VE NEVER READ THE SURGEON

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GENERAL'S REPORT.
Q. WELL, THE SURGEON GENERAL DEFINES CAUSE AS "A SIGNIFICANT EFFECTUAL RELATIONSHIP BETWEEN AN AGENT AND AN ASSOCIATED DISORDER OR DISEASE IN THE HOST."
GIVEN THAT DEFINITION, DOCTOR, DOES CIGARETTE SMOKING CAUSE LUNG CANCER?
A. CAN YOU READ THAT AGAIN TO ME, PLEASE. I DIDN'T QUITE UNDERSTAND IT.
Q. SURE. "A SIGNIFICANT EFFECTUAL RELATIONSHIP BETWEEN AN AGENT AND AN ASSOCIATED DISORDER OR DISEASE IN

THE HOST."
A. I HONESTLY DON'T KNOW WHAT THAT MEANS. I THINK THAT PEOPLE SHOULDN'T SMOKE. I THINK SMOKING IS A RISK FACTOR FOR THE DEVELOPMENT OF LUNG CANCER.
I WOULD RESERVE, AS A SCIENTIST, THE TERM "CAUSE" FOR SOMETHING ELSE, THAT THERE ARE MANY RISK FACTORS FOR THE DEVELOPMENT OF CERTAIN DISEASES.
AND IN THE CASE OF LUNG CANCER, SMOKING IS CERTAINLY AN IMPORTANT RISK FACTOR, BUT I'M NOT QUITE SURE WHAT THAT DEFINITION MEANS. I'M SORRY, I DON'T. THAT'S NOT WHAT I DO.
Q. YOU DON'T DETERMINE CAUSAL SIGNIFICANCE?
A. I DON'T THINK THAT'S MY JOB. PATIENTS COME TO ME WITH A LUMP IN THEIR CHEST, AND I OPERATE ON THEIR LUNG CANCER. I'M NOT IN THE BUSINESS OF TELLING THEM EXACTLY HOW THEY GOT THEIR LUNG CANCER.
I KNOW THEY KNOW THEY SHOULDN'T SMOKE. I TELL THEM NOT TO SMOKE. I THINK SMOKING IS SOMETHING TO BE

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AVOIDED.
BUT I CAN'T TELL THEM THAT "YOUR CANCER WAS CAUSED BY SMOKING."
Q. SO THE FOLLOWING STATEMENT BY THE SURGEON GENERAL IS -- LET ME SEE IF YOU CAN AGREE WITH THIS: "CIGARETTE SMOKING IS CAUSALLY RELATED TO LUNG CANCER"?
A. I HAPPEN TO DISAGREE WITH THAT.
MS. CHABER: I HAVE NOTHING FURTHER.
THE COURT: MR. OHLEMEYER.

REDIRECT EXAMINATION

BY MR. OHLEMEYER: Q. DR. WARREN, DO YOU KNOW WHETHER THE SURGEON GENERAL THESE DAYS IS EVEN A SURGEON?
A. NO, I DON'T BELIEVE HE IS.
Q. OR SHE?
A. OR SHE.
Q. AS THE CASE MAY BE.
LET ME, BEFORE I ASK YOU A COUPLE OF QUESTIONS, JUST FOR A HOUSEKEEPING MATTER, WHEN YOU DESCRIBED THE IMAGES ON 2802, YOU NUMBERED THEM AS 6 PLUS C, 7 PLUS C.
WHAT DOES THE "PLUS C" MEAN?
A. THE CAT SCAN IS DONE INITIALLY WITHOUT ANY DYE OR CONTRAST. AND THAT'S TO GET A BASELINE.
AND THEN IN THIS CASE, AN INTRAVENOUS WAS PUT IN THE BACK OF THE RIGHT HAND WITH A SOLUTION, WHICH LOOKS CLEAR TO YOU AND ME AND LOOKS WHITE UNDER X-RAY, AND THAT LIGHTS UP THE BLOOD VESSELS.
SO 6 PLUS C IS IMAGE 6 WITH CONTRAST AS OPPOSED

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TO 6 WITHOUT C.
Q. WAS THE CONTRAST APPLIED BACK WHEN THESE PICTURES WERE ACTUALLY TAKEN?
A. OH, YES. AND IT LASTS A VERY SHORT PERIOD OF TIME.
Q. MS. CHABER ASKED YOU SOME QUESTIONS ABOUT INFLAMMATION AND SUBMUCOSAL MOUNDING.
DO YOU RECALL THOSE?
A. YES.
Q. MY QUESTION TO YOU IS: OF WHAT? INFLAMMATION OF WHAT? SUBMUCOSAL MOUNDING OF WHAT?
A. WELL, THINK OF THE WINDPIPE AS A PIPE, AND THERE'S A LINING IN THE PIPE, AND THE LINING OF THE PIPE IS

THE MUCOSA, AND THE BOUNDARIES OF THE PIPE, THE SUBSTANCE OF THE PIPE ARE THE CARTILAGINOUS RINGS. AND IF THERE IS INFLAMMATION OF THE LINING PORTION, IT WILL LOOK THICKENED, IT WILL LOOK GLISTENING, BUT IT WON'T NECESSARILY BE RAISED OFF THE SUPPORT OF THE PIPE.

BUT YOU CAN GET TUMOR THAT GROWS IN UNDER THE LINING, LEAVING THE LINING ALONE. AND THAT IS CHARACTERISTIC FOR SMALL CELL CARCINOMA.

Q. IS THAT SOMETHING THAT YOU CAN SEE ON THE BRONCHOSCOPE WHEN YOU PERFORM THAT PROCEDURE?

A. ABSOLUTELY.

Q. AND IS THAT SOMETHING THAT YOU, AS A SURGEON AND AS A TEACHER, WERE TRAINED TO AND DO TRAIN PEOPLE TO OBSERVE AND RECORD?

A. ABSOLUTELY.

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Q. IS THERE ANY EVIDENCE OF SUBMUCOSAL MOUNDING IN THE BRONCHOSCOPY THAT WAS PERFORMED IN MS. HENLEY'S CASE?

A. NOT BY THE REPORT.

Q. DOCTOR, IN FORMING YOUR OPINION IN THIS CASE, YOU CONSIDERED, AS I UNDERSTAND IT, MS. HENLEY'S SYMPTOMS; IS THAT RIGHT?

A. THAT'S RIGHT.

Q. THE X-RAYS?

A. YES.

Q. THE CT SCANS?

A. CORRECT.

Q. THE REPORT OF THE BRONCHOSCOPY?

A. YES.

Q. THE RESULTS OF THE MEDIASTINOTOMY?

A. YES.

Q. INCLUDING THE PATHOLOGICAL BIOPSY?

A. CORRECT.

Q. AND THE ATTEMPTS TO DETERMINE WHETHER THERE WERE OR WERE NOT METASTASES IN OTHER SITES?

A. THAT'S RIGHT.

Q. IS THAT INFORMATION STATISTICS OR IS THAT INFORMATION ANATOMY?

A. THAT'S ANATOMY.

Q. IS IT ANATOMY THAT YOU AS A DOCTOR USE TO COMPARE AND CONTRAST WHAT YOU KNOW ABOUT DISEASE OR WHAT YOU READ ABOUT OTHER DISEASE?

A. EVERY DAY.

Q. IN ORDER TO DETERMINE WHERE A CANCER STARTED IN

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SOMEBODY'S BODY, DO YOU AS A DOCTOR USE STATISTICS OR DO YOU USE ANATOMY?

A. I USE ANATOMY.

Q. IS THAT WHAT YOU'RE TRAINED TO DO?

A. YES, SIR.

Q. WHAT RESPECT TO THESE X-RAYS, YOU RECALL WHEN MS. CHABER HAD THE OPPORTUNITY TO TAKE YOUR DEPOSITION?

A. YES.

Q. YOU DID IN FACT PUT THE X-RAYS ON THE BOX, DIDN'T YOU?

A. YES.

Q. AND DESCRIBED YOUR IMPRESSIONS FOR HER?

A. YES.

Q. WHILE THE COURT REPORTER TOOK IT ALL DOWN?

A. YES.

Q. YOU MENTIONED -- MS. CHABER MENTIONED A DOCTOR BY

THE NAME OF DR. GOULD.
IS HE A PATHOLOGIST?
A. YES, HE IS.
Q. DOES HE WORK AT THE HOSPITAL YOU WORK AT?
A. YES, HE DOES.
Q. IS HE SOMEBODY WHO HAS SPECIAL BACKGROUND, EDUCATION OR TRAINING IN THE AREA OF CANCER?
A. OH, YES.
Q. DO YOU AND HE WORK TOGETHER AT THE HOSPITAL TO TREAT PATIENTS AND TO DIAGNOSE THEIR DISEASE?
A. TO DIAGNOSE, BUT NOT TO TREAT. SOMEBODY ELSE DOES THAT.

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HE'S A PATHOLOGIST. HE TELLS ME WHAT IS SEEN IN THE PATHOLOGY. BUT HE DOESN'T GIVE ME ANY INPUT IN THE TREATMENT OTHER THAN WHATEVER INSIGHTS I CAN GATHER FROM WHAT HE SAYS IT IS.
Q. SO DISCUSSING MEDICAL CASES OR MEDICAL EVIDENCE WITH DR. GOULD IS SOMETHING THAT'S TYPICAL IN YOUR DAY-TO-DAY PRACTICE?
A. OH, MANY TIMES A WEEK. BUT HE COULDN'T INTERPRET AN X-RAY. THAT'S SIMPLY NOT HIS FIELD.
BUT SURGICAL PATHOLOGY IS VERY MUCH HIS FIELD, SO HIS INTERPRETATION OF THE BIOPSY IS HIS STRENGTH. BUT MINE IS THE CLINICAL PRESENTATION, THE X-RAYS AND THE MANAGEMENT OF PATIENTS.
Q. HAVE YOU AND HE DONE RESEARCH AND PUBLISHED THE RESULTS OF THAT RESEARCH TOGETHER?
A. OH, YES.
Q. HAVE YOU EVER PUBLISHED ANY RESEARCH WITH DR. HAMMAR?
A. NO.
Q. DR. SAMUEL HAMMAR?
A. NO.
Q. DO YOU KNOW WHETHER ANY OF YOUR RESEARCH IS PUBLISHED IN DR. HAMMAR'S TEXTBOOK?
A. OH, YES, HE'S REFERENCED OUR WORK.
Q. IN WHAT CHAPTER, DO YOU KNOW?
A. NOT OFFHAND.
Q. DO YOU KNOW WHETHER HE'S REFERENCED ANY OF YOUR WORK ON THE ISSUE OF NEUROENDOCRINES OR CARCINOMA?

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A. OH, YES.
Q. AND THAT'S A BOOK, AS I UNDERSTAND IT, THAT'S USED IN MEDICAL SCHOOLS?
A. OH, YES.
Q. DOCTOR, I DON'T -- AND I KNOW IT'S LATE AND I WANT TO MOVE THIS ALONG. I DON'T WANT BE FACETIOUS. I KNOW THERE'S NOTHING FUNNY ABOUT ANY OF THIS. IS IT FAIR TO SAY THAT YOU KNOW LUNG CANCER WHEN YOU SEE IT?
A. IN THE MAJORITY OF TIMES, YES.
Q. ARE YOU REASONABLY CERTAIN THAT THIS TUMOR, MS. HENLEY'S TUMOR, DID NOT START IN HER LUNG?
A. IT WOULD BE --IT WOULD BE THE MOST UNUSUAL LUNG CANCER THAT I HAVE SEEN IN A LONG, LONG, LONG TIME. IT JUST DOESN'T LOOK LIKE A LUNG CANCER.
Q. NOW, WITH RESPECT TO LUNG CANCER THAT GROWS BY DIRECT SPREAD, SMALL CELL, MS. CHABER ASKED YOU ABOUT THAT. WHEN LUNG CANCER GROWS BY DIRECT SPREAD, DOES IT LOOK LIKE WHAT YOU'VE DESCRIBED IN MS. HENLEY'S CASE?
A. NO.

Q. YOU WERE ASKED SOME QUESTIONS ABOUT THE DIAGNOSIS OF SMALL CELL CARCINOMA OF THE THYMUS. AND I BELIEVE YOU WERE ASKED TO AGREE OR DISAGREE WITH THE STATEMENT THAT IT MUST BE BASED ON EXCLUSION OF A PRIMARY TUMOR ELSEWHERE.

A. THAT'S WHAT IS REPORTED IN THE MEDICAL LITERATURE TO BE ABSOLUTELY CERTAIN THAT IT IS A THYMIC SMALL CELL CARCINOMA.

TO BE CERTAIN THAT THAT'S WHAT IT IS AND TO BE ABLE TO WRITE IT UP, I THINK STILL THAT HAS TO BE THE GOLD

0079

STANDARD.

Q. AND AM I CORRECT THAT IN THAT SAME REFERENCE, THE STATEMENT IS MADE THAT "DIAGNOSIS OF SMALL CELL CARCINOMA OF THE THYMUS IS OFTEN MADE RETROSPECTIVELY OR ON POSTMORTEM"?

A. YES.

Q. WHAT DOES "RETROSPECTIVE" MEAN?

A. WELL, IT MEANS AFTER THE FACT, AFTER THE PATIENT HAS PRESENTED, AFTER THEY HAVE DIED, AFTER YOU HAVE MORE INFORMATION, SUCH AS A POSTMORTEM EXAMINATION, TO HAVE A CHANCE, FOR INSTANCE, IN THIS CASE, TO LOOK AT THE LUNGS VERY CAREFULLY, TO SUBMIT MANY, MANY SECTIONS FROM THE LUNG TO BE SURE THAT THERE IS NO HIDDEN SITE.

Q. IN ESSENCE, IS WHAT YOU CONSIDERED AND WHAT YOU DESCRIBED FOR US WITH RESPECT TO WHETHER THIS TUMOR STARTED IN THE LUNG OR SOMEWHERE ELSE ESSENTIALLY HOW YOU WOULD GO ABOUT MAKING A DIAGNOSIS OF EXCLUSION?

A. I'M SORRY. I DON'T UNDERSTAND THE QUESTION.

Q. IS THE PROCESS THAT YOU EMPLOYED TO FORM YOUR OPINIONS IN THIS CASE MORE OR LESS ONE OF A DIAGNOSIS OF EXCLUSION?

A. WELL, YES, IT IS. WE'VE LOOKED I THINK FAIRLY HARD AT THE LUNG. I SUPPOSE THE ONLY OTHER THING TO HAVE BEEN DONE WAS TO HAVE TAKEN MULTIPLE BRONCHOSCOPIC SPECIMENS, WHICH WASN'T DONE BECAUSE NOTHING WAS SEEN THAT MERITED TAKING ANY SAMPLES. BUT THAT'S VIRTUALLY THE ONLY THING THAT HASN'T BEEN DONE THAT COULD HAVE BEEN DONE AT THE TIME, BUT NOTHING WAS SEEN.

YOU POSSIBLY COULD HAVE TAKEN SOME BLIND BIOPSIES

0080

TO KNOW FOR SURE. BUT IN FACT, IN THE VAST MAJORITY OF CASES, IT DOESN'T MAKE ANY DIFFERENCE IN THE TREATMENT.

SO MANY TIMES A SURGEON OR A BRONCHOSCOPIST, ONCE THE DIAGNOSIS IS MADE, TO GO BACK AND DETERMINE ABSOLUTELY WHETHER THERE WAS ANYTHING IN THE LUNG IS SIMPLY AN ACADEMIC EXERCISE. IT MAY BE IMPORTANT, BUT IT'S NOT IMPORTANT FOR THE MANAGEMENT OF THAT PATIENT, BECAUSE IT'S GOING TO BE EXACTLY THE SAME.

Q. AND BASED ON EVERYTHING YOU HAVE REVIEWED, YOUR BACKGROUND, YOUR EDUCATION, YOUR EXPERIENCE, ARE YOU REASONABLY CERTAIN THIS TUMOR DIDN'T START IN THE LUNG?

A. I'M REASONABLY CERTAIN.

Q. FINALLY, DOCTOR, YOU MENTIONED TESTIFYING IN COURT IN THE PAST.

HAVE YOU EVER TESTIFIED IN COURT IN A CASE INVOLVING TOBACCO ISSUES?

A. NO.

MR. OHLEMEYER: THAT IS ALL I HAVE.

THANK YOU, YOUR HONOR.

THE COURT: ANYTHING FURTHER?

MS. CHABER: JUST A LITTLE BIT.

RECROSS-EXAMINATION

BY MS. CHABER: Q. DOCTOR, YOU SAID YOU MADE YOUR EVALUATION BASED ON REPORTED SYMPTOMS, BASED ON THE RECORDS, BASED ON THE X-RAYS, BASED ON THE CT SCANS, BASED ON THE PATHOLOGY, BASED ON ALL THAT INFORMATION.

IS THAT WHAT YOU JUST SAID TO MR. OHLEMEYER?

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A. YES.

Q. DOCTOR, ISN'T IT TRUE THAT MS. HENLEY'S DOCTORS, HER TREATING DOCTORS, THE PEOPLE WHO MADE THE DECISIONS IN THIS CASE ABOUT WHAT SHE HAD, TOOK INTO CONSIDERATION HER SYMPTOMS, HER MEDICAL RECORDS, HER CHEST X-RAYS, HER CT SCANS AND THE PATHOLOGY AND CAME UP WITH A CONCLUSION THAT SHE HAD LUNG CANCER?

A. SOME OF THEM, BUT NOT ALL OF THEM.

Q. DOCTOR, THE SURGEON WHO OPERATED ON MS. HENLEY CAME INTO COURT.

YOU UNDERSTOOD THAT; RIGHT?

A. I ASSUMED THAT.

Q. AND HE INDICATED THAT HE CONSIDERED ALL OF THOSE THINGS, LOOKED AT MS. HENLEY, TOUCHED MS. HENLEY, HAD HIS HANDS IN HER CHEST AND THAT SHE HAS LUNG CANCER.

WERE YOU AWARE OF THAT?

A. I WAS NOT AWARE OF THAT.

Q. NOW, DOCTOR, WHEN YOU'RE TALKING ABOUT LUNG TUMORS AND SMALL CELL LUNG TUMORS, THERE CAN BE AN OCCULT PRIMARY; CORRECT?

A. CORRECT.

Q. AND "OCCULT" MEANS THAT IT'S HIDDEN?

A. THAT'S RIGHT.

Q. AND IN FACT, ONE OF THE REASONS STATED FOR MAKING THYMIC CANCER A DIAGNOSIS OF EXCLUSION IS THE FACT THAT SMALL OR OCCULT LUNG PRIMARIES IN THE PRESENCE OF BULKY MEDIASTINAL DISEASE CAN BE LUNG CANCER?

A. YES.

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Q. AND THEY ALSO INDICATE THAT SMALL CELL CARCINOMA OF THE LUNG -- SMALL CELL CANCER OF THE LUNG IS KNOWN TO METASTASIZE MASSIVELY TO THE MEDIASTINUM --

A. THAT'S CORRECT.

Q. -- CORRECT?

A. BUT IN THIS CASE, THE SPREAD TO THE MEDIASTINUM IS NOT MASSIVE. THERE IS ONE MASS THAT IS 6 CENTIMETERS IN SIZE, BUT NO OTHER LYMPH NODES. AND THAT IS A VERY LARGE SIZE FOR AN OCCULT PRIMARY.

Q. IN FACT, THAT CANCER WAS STAGED AS A STAGE 3 CANCER, WASN'T IT, DOCTOR?

A. I WOULD ASSUME SO, IF THEY ASSUMED THAT IT'S LUNG CANCER, BUT I DON'T.

MS. CHABER: NOTHING FURTHER.

THE COURT: ANYTHING FURTHER?

MR. OHLEMEYER: JUST A QUESTION.

FURTHER REDIRECT EXAMINATION

BY MR. OHLEMEYER: Q. DOCTOR, YOU HAD AN OPPORTUNITY TO READ AND REVIEW THE MEDICAL RECORDS PREPARED BY DR. HAGEN AND HIS STAFF AT THE TIME THEY PERFORMED THE PROCEDURES ON MS. HENLEY?

A. YES.

Q. AND READ THE DEPOSITION THAT WAS TAKEN WHERE HE DESCRIBED HIS WORK IN THE CASE?

A. YES.
MR. OHLEMEYER: THAT'S ALL I HAVE.
THANK YOU, YOUR HONOR.

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THE WITNESS: AND I SEEM TO RECALL THAT HIS DISCHARGE SUMMARY SAID THAT IT WAS "SMALL CELL CARCINOMA, PRIMARY SITE UNKNOWN."
MR. OHLEMEYER: Q. THAT'S A MEDICAL RECORD PREPARED AT THE TIME OF THE TREATMENT?
A. THAT'S RIGHT.
MR. OHLEMEYER: THAT'S ALL I HAVE, YOUR HONOR.
THE COURT: ANYTHING FURTHER?
MS. CHABER: NO.
THE COURT: MAY THE DOCTOR BE EXCUSED?
MS. CHABER: YES.
MR. OHLEMEYER: YES. THANK YOU, DOCTOR.
THE COURT: OKAY. DOCTOR, YOU ARE EXCUSED.
(WITNESS EXCUSED)